

ITEMS OF INTEREST.

VOL. XIII.

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No. 9.

Thoughts from the Profession.

DENTAL COLLEGES vs. NON-GRADUATES.

BY A VETERAN.

It is conceded that the colleges are useful as well as ornamental, and should receive encouragement from all; but their benefits should be open to all who are "worthy and well qualified." Under the present ruling, their doors are practically closed to the majority of dentists, even of those competent and of long experience.

We will assume that prominent among the commendable objects of the dental college are the following:

First.—To restrict the number engaged in the calling.

Second.—To raise the standard of dignity and proficiency of dentistry.

Third.—To make money and professional prestige for the faculty.

As to their restricting the number in the profession, it is questionable, for every calling is destined to be filled and over-run where there is desirable remuneration.

As to their raising the standard of the profession, success will be limited so long as the colleges accept anybody and everybody, and graduate people who have never studied even grammar, and could not write a ten-line paragraph correctly to save their lives.

As to their making money for themselves, the success would be even greater by admitting all the respectable old dentists and graduates who are competent to practice dentistry properly.

The proposition requiring the old dentists, whatever their information, experience and standing, to take a three years' course with the beardless boys, fresh from the school-room, shop and plow,

is simply ridiculous. To say nothing of the humiliation, let us estimate the cost and inconvenience. Three terms would require, say, fifteen months. This time to the dentist in average practice is worth, at least, \$1,500. Then the sum total of other expenses would be \$1,000 more. But this is not all. Absence from practice, together with inroads by competitors, would injure his business about as much more. In all, not less than \$5,000. Who could afford it? and who would take a three years' course of instruction at these figures? and is it just to require it?

Now, instead of this practical way of saying "stay out," suppose the colleges would invite the old dentists something like this: "Gentlemen, our colleges are short-cut routes to important and essential information, on which experience must be founded to make a professional dentist. We teach this information to beginners by easier methods and in shorter time than you have obtained it. But when the boys are fully instructed theoretically, by our efficient methods, they must still have actual practice to be your equals in work. It is fair to presume that you, gentlemen, who have read the journals, the text-books, and studied the catalogues, and associated together for improvement, and have had from ten to forty years' solid experience in all branches of the profession, and with all sorts of people, have the needed information. And if so, you are entitled to full credit for all you know and all you can do. Then come, and welcome, to our college and be examined. If you are already proficient in practical work, we will give you the difference to which study at home and long experience entitle you. If, perchance, you are not fully up to our standard, we will be pleased to place you in the class where you belong. As your lack will probably be on technical points, we will permit you to get them and pass on. And whenever you can pass an examination in practical dentistry, we will crown you and pass you with all honors. Money-making, however, being a commendable mission of our college, we will, of course, charge you our regular fees."

For my life I can see no objection to such an arrangement, and I believe it would call to the colleges three-fourths of the non-graduates. The present course can keep them out of graduation, but not out of the profession, nor out of business. Most of the old practitioners have worked their niches into the wall and are here to stay; so the restricting process can not affect them.

If dignity is desirable, why not tone up the whole body instead of a part? So far as money is concerned, the colleges would be largely the gainers. *And who would be the losers?*

J. W. Greene, Chillicothe, Mo.

PYORRHEA ALVEOLARIS AND ITS TREATMENT.

Whether pyorrhea alveolaris (Rigg's disease) is a local or constitutional disease, or whether it is a local manifestation of a constitutional trouble, has been a disputed question in our profession.

That pyorrhea alveolaris is not an entirely local disease, is, in my opinion, positive, as I have never seen an actual case of pyorrhea alveolaris when the patient was in perfect health.

We find this troublesome malady accompanying almost all of the low fevers, cases of tuberculosis, chlorosis, anemia, all sorts of stomach and intestinal disorders, etc. A patient may have pyorrhea alveolaris in its first stages, and still suffer little inconvenience from it, but as the disease goes on, the pain sometimes becomes almost unbearable.

The symptoms of this disease are as follows: a bluish hue of the gums, especially that portion surrounding the necks of the teeth. There is a collection of salivary calculus around the necks and crowns of the teeth. The teeth mostly affected in this way, are the upper molars and lower incisors. Next we find a looseness of the teeth, which goes on to such an extent as to make them drop out. When they do not drop out, pus exudes from the sacs surrounding the necks and roots of the teeth, making the breath offensive.

That we never have pyorrhea alveolaris in cases where all the teeth have been extracted may be so, but I have on several occasions seen a condition in such mouths where we had almost the identical symptoms as in pyorrhea alveolaris, with a sloughing of the soft parts of the mouth, especially in the lower jaw.

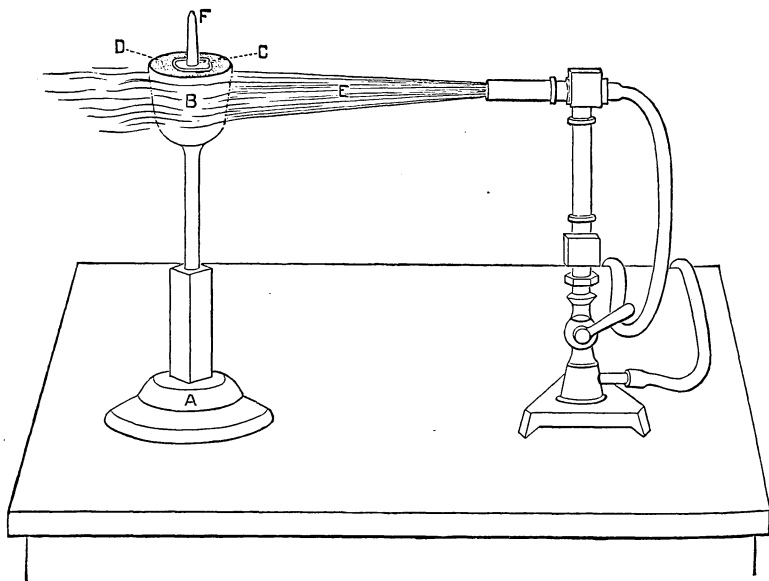
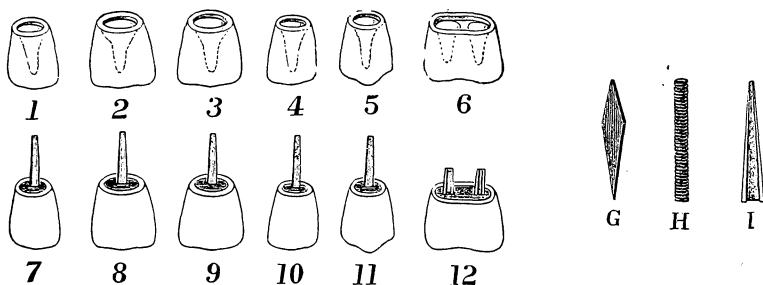
The treatment of pyorrhea alveolaris, in which I have been most successful, is as follows: I remove all deposits of salivary calculus, as thoroughly and effectually as possible, then syringe around the necks of the teeth with a solution of bichloride of mercury (1-1000), and have the patient rinse the mouth with it.

The loose teeth are then held firmly in place by ligaturing them with fine platina wire. The local after-treatment, consists of antiseptic syringings and washes, and this can be accomplished best by using peroxide of hydrogen, solutions of carbolic acid, boracic acid, permanganate of potash, etc.

During this time, the patient must be put on tonic treatment of iron, quinine, syrup hypophosphites, etc., and the case watched for some time. *B. D. Friedenwald, D.D.S., Nashville, Tenn.*

UNIVERSAL TOOTH CROWN.

Simple, all porcelain crowns, as illustrated in the engravings Figs. Nos. 1, 2, 3, 4, 5, 6, when properly comprehended by the dental practitioner, may be applied in so many ways as to merit the nomination universal. Practically they consist of hollow veneers.



At the clinic referred to in previous numbers of the *ITEMS* I have exhibited specimens of bridge-work, sectional block work, and various forms of crowns for roots, in which this class of veneers were used to great advantage. See Figs. 7, 8, 9, 10, 11, 12, manipulated as follows: The engraving A represents a solid iron

base, which serves as a support for the platina cup B. The latter is made about one-sixteenth of an inch larger than the hollow veneer C; the space D between the cup and veneer is filled with powdered silice, which serves as an investment to protect the hollow crown from too sudden changes of temperature when subjected to the blast of the blow-pipe E. The post is held in place with powdered glass, and by gradually throwing the flame of the blow-pipe, as shown at E, the powdered glass will become thoroughly fused and establish the post, as shown in the Figs. 7, 8, 9, 10, 11, 12. Figs. G, H, I are modifications of posts used, which may be composed of either nickel, gold, platina, or appropriate alloys, the glass fusing at such a low temperature that the ordinary metals may be used without any danger of the post oxidizing or injuring them in the least. The advantages claimed for this class of crowns are that they may be fitted to the roots of teeth before the posts are adjusted and placed at any desired angle, made any size or length, and, when completed, are remarkably strong, durable, and the cost nominal—as compared with similar products. Methods of applying this class of veneers to sectional block work will be illustrated in a series of articles.

Dr. C. H. Land, Detroit, Mich.

A PARTIAL SET OF TEETH SWALLOWED.—Is it a trifling matter? A lady, aged 26, called on Dr. E. O. Smith to have the right lower second bicuspid extracted. Chloroform was administered and the tooth removed. As she recovered from the anesthetic she complained of a pain in the chest.

“Oh, that will soon pass away,” said the dentist; “it is the effect of the gas.”

A moment later she said: “Why, doctor, where are my artificial teeth?”

She had a plate of rubber of two teeth. It could not be found, and soon it became clear she had swallowed it, and that this was the cause of the pain.

A physician was summoned who found them partly down the throat, but in trying to recover them pushed them quite beyond his reach. The pain disappeared for forty-eight hours, when it returned with such force that large doses of morphine had no effect. For the last few days she has been easy, though the plate is not recovered.

What is the probable outcome?

FINISHING THE MARGINS OF TEETH.

In Illinois Society.

Dr. C. N. Johnson: We often find faulty preparation of proximal cavities in molars and bicuspid where they come to the grinding surfaces. They are left too narrow at the opening. The enamel should ordinarily be cut well back toward the cusps at the angle between the proximal and grinding surfaces. We thus avoid leaving a sharp edge of enamel which will eventually be broken down by mastication, and we provide better access to the cavity. The enamel can be trimmed away quickly and accurately with sand-paper disks, and I have found nothing that will answer so well in my hands. I can give the edge any shape I wish with them, and make the outline symmetrical and true. Of course, they will not do for the cervical margin—I refer to that part of the cavity approaching the grinding surface.

Dr. Black: I want to say a few words in regard to polishing margins of cavities with disks. Dr. Johnson may do this very nicely, but he may have unintentionally conveyed a wrong impression to some of the members by speaking of rounding the margins. I will ask you to stop and think what rounding margins means. If we polish the margins with anything that is soft, with any form of polishing powder used on soft material, on wood, rubber, or what not, we will round the margin. Suppose I have a cavity in a central incisor. Instead of cutting this square with the surface of the enamel, it should be, a definite obtuse angle. If I polish it I round it over. It makes a nice thing to fill against; but when I make a section of that tooth, including the filling made against such an edge, I will find that at the margin there is a feathered edge of gold. You will form a feathered edge of gold over it if you round the marginal edge of your enamel. You should have in your mind the form which will be given to the marginal edge of your gold filling, and thin it out to a feather edge in any case, for in the formation of a nice rounded margin to fill against you form an edge to your gold filling that is unreliable. In forming your marginal edges take a good, sharp chisel and plane them so as to make an obtuse, but definite angle of your filling, getting a proper beveled marginal edge of the enamel in every instance. It is just as important that the marginal edge of gold filling be right as the margin of the enamel itself. We must have them both right to get the best results. One of the difficulties in getting marginal edges of enamel in proper form is to prevent thinning out of the marginal edge of the filling material till it becomes unreliable. You should never

polish the marginal edge of the enamel on which you are going to place a filling with pumice stone or paper disk unless it is in position in which you can so hold it to make a definite angle; then you need to be careful about it; never polish it with pumice carried by a stick or anything of this kind, but plane it with a good sharp chisel, holding its edge parallel with the enamel rods, and the movement should be parallel with the marginal line of the cavity.

By the term marginal edge of the enamel I mean the cut edge of the enamel including its thickness. By the term enamel margin, or line of the enamel margin, I intend to convey the idea of the line forming the limits, or outline of the cavity. These two ideas should always be held distinct in the mind when discussing this subject. We form the line of the enamel margin by cutting away till the proper form is given to the outline of the filling. We form the marginal edge of the enamel by planing it to the proper bevel and smoothing it.

With the mesial surface of a molar tooth, with the cavity reaching nearly to the gingival line, we have the line of the enamel margin of the cavity, and make a bevel to form the marginal edge of that line of enamel margin. The line of the enamel margin is important, and the forming of the proper bevel on the marginal edge of the enamel is also important. This form is so important that we should be careful to make it with reference to the form of the marginal edge of the filling, as well as the marginal edge of the enamel.

We do not want any square edges of enamel, they should be beveled. We do not want an acute, or square corner.

When you form a cavity that is rounded and does not come close to the gingival line, the rule is you get recurrence of decay at this point, along the buccal or lingual marginal line of the filling near the gum. Even though you have made a perfect filling you get recurrence of decay. You get it a good many times when you do not make a perfect filling. The contact point is here and the gum covering the proximate surfaces of the teeth comes up and reaches that contact point in young persons in a normal condition. The interproximate space is filled with soft tissue, and every portion of tooth tissue that is covered by the gum septum is protected against decay; but in your operation you may have injured the gum septum, or it may have been injured in some other way so that it shrinks, and a considerable portion of the proximate surface of the tooth is exposed to the products of fermentation. Fermentation takes place between the two flat sides, hence we get a point of caries almost as soon as the shrinkage has taken place. Now, if you

have prepared your cavity and rounded it here in the form of these cavities after simply removing the decay, and fill, the gum shrinks down. The part is exposed by the shrinkage of the gum, at the labial and lingual curves it approaches too near to contact to be self-cleaning, and we will get recurrence of decay. I find this recurrence on the incisors wherever there is a strong tendency to caries. Why? Because shrinkage of the gum has exposed these points to the action of the products of fermentation. Cut your cavity out toward the labial and lingual, so that it will be protected by the gum for the longest possible time. That is what I mean by extension for prevention. If you find corrosion of the surface of the enamel make the lines of the enamel margin include it, make extension further in the same direction to save the tooth from a recurrence of decay, extend the cavity around those angles as far as corrosion has occurred, then make a perfect filling, and it will be a long time before you have to fill that cavity again. It is better to do that in the first place than to remove the filling on account of recurrence of decay.

Dr. Cushing : I wish to say a word in reference to the method Dr. Black advocates, of handling the chisel, because I know a better margin can be made with a properly tempered cutting instrument, than by any other method, I do not care what it is. I am sure the margins can be made perfectly smooth, but the instruments must be keenly sharp, and that is something you rarely find dentists using; they attempt to use instruments that are not sharp, and that is the reason they do not make good edges by the use of cutting instruments. If the instruments are properly tempered, sharpened to the right bevel, kept keenly sharp, you can make a perfect edge.

—Review.

CONTOURING.

When you have restored opposing surfaces of teeth to their original contours, so that their proximal sides meet at their largest diameter, taking care to faithfully close all the *joints* of their walls down to the very surface of the enamel and Nasmyth's membrane, which, as you know, is akin to fluor-spar, whose integrity fluoric acid alone can impair, you have virtually restored it to all its functions as of old and secured it in its position in the arch, and have done all that art can do, and reached the highest approximation to nature. It seems to me to be folly for any one to question the wisdom of this course, and advocate in its place the mutilation

of the teeth and flat fillings with exposed enamel and dentine borders, with the mechanical and physical disadvantages that always follow operations of this character. It has been objected that teeth when contoured become frail and are easily broken down and destroyed. In a treatise I wrote on this subject fifty years ago, when contour fillings were first advocated, I demonstrated that, by proper anchorage and undercutting, the teeth are so locked and banded together that the crown becomes stronger than by operating in the old way. In treating a tooth that has lost its vitality, the pulp-cavity can be so utilized that a broad column of gold can be built up from its center that will be sufficient to enable the contour to resist any force in masticating.

I frequently see contour fillings that were made in this city more than thirty years ago, which are as perfect to-day at their cervical borders, and in all their appointments, as though completed but yesterday. I have advocated the practice of contour fillings for nearly forty years, and my daily and constant observation in the practice of others continually confirms me in the faith.

I cannot approve of the practice of slicing off a quarter or third of the enamel and dentine from a tooth, and leaving the remainder to the possibilities of a flat filling. When we consider the construction of a tooth with the relation and position of the enamel rods, it would seem like displacing the key-stone of a succession of arches, thereby endangering the entire superstructure to make a flat surface.

To those who contend that flat fillings are superior to the contour, which restores the tooth to its original form and function, I would simply say they assume that a fraction of a tooth is superior to the original tooth itself. Any deviation from the strict construction of the *contour* must be on the ground of *expediency*, which we admit qualifies every operation that passes through our hands, but that a duplication of nature by art is superior to a partial success in that direction, it seems to me, is admitted by all.

I could refer to some of the objections to flat fillings, among others is that all normal articulation is virtually broken up, bringing with them a train of evils apparent to every one, so that teeth thus treated lose their character as teeth in a large sense, but I forbear.

The discussion of this subject is suggestive of the old inverted aphorism that "a part is greater than the whole!" Dr. Perry, after reviewing the subject of contours in a manner both exhaustive and entertaining, summarizes the whole by saying, "Get free edges, if possible, for your proximal fillings, and shape them to the original outline of the teeth."

—Dr. W. H. Dwinelle, in *International*.

TOOTHACHE AND NEURALGIA.*

DEAR FRIEND:—I have begun two or three letters to you, but each time I was interrupted by a toothache, and perhaps you know how important a toothache can be in its demands for attention when it applies itself well to its business. Those who pretend to have investigated the subject say it originates in some dissatisfaction or disaffection of a little nerve no larger than a thread, but those who have experienced the phenomenon—and who, therefore, I insist, have the most indubital means of knowing—will surely question this assertion, judging rather, from internal evidence, that it is a nerve at least as big as an oak tree. For how is it possible for a thing so very small to contain an amount of disturbance so enormous?

But they say, too, that magnitude and space are but relative terms, so much so, indeed, that there have not been lacking philosophers who declare the whole round world, with all it contains, exists nowhere else than in the hollow sphere of a man's own brain; one little nerve quivers and we think we see men walking and trees waving, another vibrates and we imagine voices speaking and thunder rolling, everything which seems without us is in reality within us, and due to the excitement of a few threads of nerves. Very well, I can readily accept all this; so when I speak of the interior of my tooth, I have in mind a region at least as large as a State; and when I speak of the throb of the toothache, I have in mind the march of armies and the boom of cannon and all heavy and rhythmical noises. And when, the other evening, I settled myself comfortably with pen and paper to write a letter to you, and felt as I began it a premonitory activity in one of my molars, the conception took form within me that this molar was a sort of Fort Sumter, around which besiegers were sending up signal rockets and beating drums, preparatory to the general bombardment. And presently all the batteries opened fire, and there was a thunder of artillery and a shaking of heaven and earth, and a whizzing and bursting of shells for the space of an hour. Then I loaded up my guns and responded with round shot, in the shape of chamomilla, nux vomica or something, I do not know what, and, wonderful to say, the besieging batteries, after having fired a last shot like a meteor high into the air, suddenly ceased and sank into silence. I went to bed, then, very jubilant over the fact that Fort Sumter had successfully repelled the attack made on it, but even while I

* Correspondence by O. E. W. to a friend, a medical student. Being one of the best descriptions of toothache we have ever read, we reproduce it. —*Editor Ohio Journal.*

was engaged in rejoicing and officers and men were all getting drunk, no doubt, like Belshazzar, my baffled besiegers were issuing a proclamation calling for seventy-five thousand three months volunteers. The next night, when I had again settled myself comfortably with pen and paper to write you a letter, I heard again the preliminary blowing of bugles and the tramp of approaching legions, seventy-five thousand strong. I will not attempt to describe the tremendous conflict that followed. Let it suffice to say that all in vain I strove to silence their continued cannonade with continual volleys of my round shot, and I retreated at last in disorder to bed, where the battle continued to rage half the night. The last thing I was conscious of was that the victors were holding a full-dress ball in my tooth to celebrate their triumph, and were all whirling and waltzing away at the maddest speed of exultancy. This battle of Bull Run has not been the last, but it was the worst: I can generally command quiet with a dose or two of chamomilla, or whatever it is, and I go to bed blessing medicine. Be a physician, my dear W, and win the benedictions of humanity by curing them of toothache.

There is no profession greater than that of medicine, none with such unrivaled opportunities for studying our common human nature, and none in which a man can get so close to human souls; but, on the other hand, so far as I can see, there is none so much afflicted with quackery and incompetency. I have known a good many physicians, and, as a rule, they are not very religious, or even very moral. I ask them what is the reason for this, and they tell me it is because they see nothing but the diseased side of men, and so lose faith in them and in everything. Then I say the true reason is not that but another, it is because they are handling a keen-edged tool which they are not skilful enough or good enough to manage, and so they cut themselves in using it. Then they call me an impractical visionary, and laugh me to scorn. It may be I am all that—in fact, it is very probable—but still, is it not an absurdity on the face of it that the beneficent art of healing should make the man who pursues it worse? That doing good should make men bad? It all lies in the motive—as in the case of the magic sword, which was apt to slip and hurt the man who wielded it unless he struck in a good cause. I used to think of being a physician—partly because it would give me a wide field of usefulness, and partly, I am afraid, on account of the opportunities it would afford me of indulging the miserable propensity which I possess of trying to put men under a microscope and noting down their peculiarities, as if they were some kind of curious bug. And that would be as bad as practicing medicine for money.

DEAR FRIEND :—I still have twinges of neuralgia, but their violence is growing less, and their intervals longer, and I hope by spring to be entirely free from it. I have always been subject to it, as far back as I can remember, and I often had to leave school, once a whole term, on account of it.

It used to be altogether in my head and temples, but now it has got into my teeth. This time it was the fault of a perjured old dentist who tinkered at my mouth for a couple of days. Just before I was to have started for Washington, I visited his office to see if anything needed fixing. Yes, there was; and he dug into my teeth with pick-ax and crow-bar; and he plugged up two of them, like ramming home a charge of a fifty-pound cannon, and assured me they would never hurt me again all my life. He had his wife help do the pounding. She held a little steel hammer that she pounded with, and as she kept looking out of the window all the time to see the people passing, I expected every next blow to fall into my eye, or on my nose. Neither of these casualties happened, for I was reserved for a more terrible fate. It is my firm conviction that ten years ago that dentist sold his soul to the devil, who came after his bargain while I was in the dentist's chair, and I will tell you why I believe this.

Once on a time there was a blacksmith who fell into serious pecuniary difficulties. While he was sitting in his shop wondering what would be the most comfortable way of committing suicide a stranger appeared and asked him if he would like to borrow some money.

"Yes," replied the blacksmith, "but I have no security."

"Do not imagine," said the stranger, with the politest of bows, "that I should ask you for any. But just as a form, you know, you might sign your name to this little note." He took a paper from his inner coat-pocket and handed it to the blacksmith, who, reading it, found it was an agreement, ten years after date, to deliver up to the bearer his soul. Then, of course, the blacksmith perceived that affable visitor was the devil. Nevertheless, he jumped at the bargain, and signed his name to the paper with a little blood from his left arm—as, you know, is usual in such transactions, and the devil handed over his inexhaustible infernal purse of gold, and the two separated with an interchange of polite compliments.

Well, the blacksmith had a gay time for ten years. No matter how much gold he took out of the purse, he always found it remained as full afterwards as it was before. He ate—whole quarters of oxen, and he drank—whole casks of beer, and he built him a big steam yacht, and went to Congress—perhaps even ran for

President. But at last the ten years were up, and, prompt to the moment, the devil appeared to foreclose his mortgage.

"Oh, yes, certainly," exclaimed the blacksmith, "I will accompany you with the greatest pleasure. But first do me the honor to dine with me, and I will have a few friends in to make your acquaintance."

So the devil stayed to dinner—a quiet little affair, at which there was a Senator or two and a member of the Foreign Legation. Every one treated him with the greatest deference and consideration, and never before, he thought, had he had a little bill like that settled with such cheerfulness and alacrity. After the wine the devil and the blacksmith walked out into the garden to smoke their cigars, and presently they came to a log into the upper side of which an auger-hole had been bored.

"Funny little auger-hole!" tittered the devil, who had been drinking a little too much: "tee-hee-hee!"

"Yes," replied the blacksmith. "You can do many wonderful things, but I suppose you can't make yourself small enough to go into that little auger-hole."

"Ho! ho! just see!" exclaimed the devil, and in the twinkling of an eye he had changed into a vest-pocket edition of himself, and jumped into the auger-hole. That was all the blacksmith wanted, and instantly clapping a wooden wedge in the hole, he drove it nearly down to the bottom with one blow of his heavy hammer.

Such a screech as burst from the duped and imprisoned devil, with stomach and head and heels all mashed together, like a cake of compressed yeast, I will leave to you to imagine. And by the time the blacksmith had brought down his terrible hammer again, the devil was crying for quarter.

"I want ten years more," said the blacksmith, heaving up his hammer again.

"Yes! yes! take them!" screamed the prisoner; "ten years more if you will only let me out!"

So having been released, and having regained his former size, he limped off, rubbing his bruises and swearing, very sore and lame.

What happened at the end of the next ten years, and then at the end of the next, it would not be appropriate in this connection to relate, though I chance to know. I simply wished to acquaint you with the historical fact on which I base the explanation of my neuralgia this winter. I suppose the dentist had sold his soul to Satan ten years ago. I suppose the sooty creditor appeared while I was in the chair, and beckoned the dentist to accompany him. "One moment," whispered the dentist, "do you suppose, with your

black art, that you could make yourself small enough to slip down into the bottom of the little hole in that tooth? I suppose not."

"Ah, that's nothing!" laughed Satan, and the next instant, there he was, snug at the root of the tooth, and the next moment the dentist had clapped a little pellet of filling on him and was hammering it down. And he sealed him up there safe and tight, and there he has remained to this day, with what results only that dentist can appreciate, steeped to the eyes in unpunished iniquity; or I, suffering the torments of the inquisition, as that little devil squirms and kicks in the root of my tooth. And, the devil being shut up, that is the reason the world is growing so much better.

UNITING AMALGAM TO GLASS AND TO BONE.

Thursday afternoon and evening, March 12th, 1891, demonstrations were given at the dental depot of The Wilmington Dental M'f'g. Co., Philadelphia, showing how amalgam could be made to adhere to glass or bone, based on the theory that any substances brought in such close contact as to be within the range of molecular attraction, would adhere with considerable force. Manifestations of this law may be seen between two pieces of polished glass brought close together. Their surfaces are so near together as to be just within the range of molecular attraction, and by adding a little water they are brought still closer. Molecular attraction takes place between particles of their substance at imperceptible distances. To prove the theory I selected amalgam and glass as two of the most appropriate substances having no apparent affinity for each other, unless this supposed law would govern. To prevent the amalgam from slipping, the surface of the glass is frosted or ground, then by means of a burnisher the amalgam is forced into the range of molecular attraction deep enough to secure an adhesion of over one hundred and fifty pounds to the square inch—that is, after the amalgam is allowed to harden, say for three days. At present I have specimens where knobs of amalgam are adhering to glass with remarkable force, and have for months remained in water, showing no sign of becoming detached. Also metallic facing amalgamated to glass, etc. A glass paper weight having amalgam knob and aluminum facing firmly attached. In another number of ITEMS I will give some facts relating to the adhesion of amalgam to bone, a continuation of this clinic.

C. H. Land, D.D.S., Detroit, Mich.

ODDS AND ENDS.

I fill the apex of roots to be crowned, if straight and convenient of access, with lead. Where it can be used and the discoloration will not appear, there is nothing like it. Just beat it out thin and cut into strips about one-sixteenth of an inch in width, and twist these, but not tightly. Then, if too large, gently roll between fine sand or emery paper, and this kind of a lead plug will easily be pressed to fit every space and foramen. Where I cannot get such access, I must use chloro-percha or gutta-percha. Where a fine broach cannot be used, I work as much iodol or iodoform into the root as possible, leaving the pulp chamber coated with iodoform, made to the consistency of paste with pure wood creasote; then I fill the best I can with chloro-percha, and have no trouble with them afterward. The extremely small canals are not going to give trouble, treated in this way, and I have reason to believe they will ossify before the medicine is exhausted.

I have recently crowned (using the gold crown) two living bicusps. They were broken down badly, but had good nerves. I am having thus far, and I verily expect, complete success in both.

In spite of all the slurs spoken against copper amalgam, on account of its color, there are some places where nothing else will do so much toward saving teeth; and, though I use it sparingly and carefully, I am going to continue its use where indicated.

In May ITEMS, page 299, Dr. William E. Blakeney says, "It is a much better and cheaper plan to use cement instead of gold for packing joints of artificial teeth." I want to say, that cement, however good, after being vulcanized, will dissolve and wash out and leave a receptacle for food, bugs and the like.

A gentleman finds fault that I have to use gold to fill my poor joints. Now, I've not a word to say to those who can make *perfect* joints. I cannot, and my article was intended for those like myself who could not make a perfect joint by grinding. But by packing with gold foil we can make our poor joints appear to be continuous gum, and where nothing can corrupt, nor bugs live in to smell.

Dr. France, of Milford, Del., has not been true to his profession, if he has known and used this plan for thirty years, and has never told it (see June ITEMS, page 354). But I thank Dr. France for the idea of using tin foil. I'll try it; but I fear its color will condemn it, though I know it to be one of our most faithful and honest servants in the whole line of filling materials.

Lindley H. Henley, D.D.S., Marshall, Texas.

ARE GAS FURNACES A SUCCESS?

In the article on the above subject in your July issue, the writer has made several very serious errors which are liable to mislead experimenters and cause unnecessary trouble. It is stated that "the gasing of porcelain is simply the *dioxydizing* (?) of the oxides of which porcelain is composed." What your correspondent means by dioxydizing can only be imagined by chemists in this country, but *whatever* is meant it is wrong, as the so-called "gasing" is caused by the action of sulphur in the fuel, and if a hydrocarbon fuel is used which does not contain sulphur, the so-called "gasing" does not occur, even if a muffle is not used, and the work is done in the open flame, provided the enamel or glaze does not contain lead.

The next curious statement is that "in all combustion chambers of gas furnaces air must be forced into them under a pressure of at least one and a half pounds to the square inch." Although my injector furnace burner is universally copied by all makers of high temperature furnaces, many of those who do copy it have very curious ideas of its action. The fact that I recommend a blower giving a pressure of one and a quarter to one and a half pounds square inch *in the injecting jet* is a very different thing to saying that this pressure occurs in the furnace, anything like this would blow the muffle out of the furnace, and if your correspondent will take the trouble to test the pressure at the outlet of the burner he will find it nearer one and a half ounces than one and a half pounds. In addition to this, I may state that air under pressure is not necessary for all classes of continuous gum work, and I have seen plenty of good work done in my ordinary draft muffle furnaces, amongst others by Mr. I. G. Turner, of London, and within the last few days by Mr. George Cunningham, of Cambridge. The statement that muffles exposed to flame become "dioxydized" is curious; if your correspondent means deoxydized then he is wrong, the silica and alumina of which the muffles are made are both absolutely unchangeable in their chemical composition, at any heat obtained in these furnaces, and a little observation will show that fracture is caused only by the sudden or unequal heating and cooling of a material which is not elastic, and which, therefore, if unequally or irregularly heated, must of necessity break. It will also be useful for your correspondent to know that cracks can be repaired with stiff paste composed of fluid silicate of soda.

Thos. Fletcher, F.C.S., England.

HEADACHE CAUSED BY ARTIFICIAL DENTURE.

Five months ago Miss S——, twenty-six years of age, was referred to me by a physician for the purpose of relieving a severe frontal headache, the result of wearing an upper vulcanite denture. I elicited from her the following: At eighteen years of age she had all her upper teeth extracted; six months afterward a vulcanite denture was inserted, and was worn with much discomfort for four years, when she had a new denture constructed of the same material. A few weeks after its insertion she suffered from a burning sensation on the palate, and a severe frontal headache. On removing the denture she would obtain relief in a short time. She visited her dentist for relief, and he recommended a black vulcanite, or gold base, instead of the red vulcanite. The black vulcanite denture was substituted, but the troubles reappeared. Another dentist was consulted; he inserted a denture on gold base 20-K, which was a decided improvement. The burning sensation did not recur, but the frontal headache still remained. She suffered at times intensely. The gold denture was worn at intervals for two years before her call on me. I found the mucous membrane in a comparatively healthy state, being only slightly congested; the palate flat, ridge low and narrow, anterior portion of ridge very flabby, buccinator muscle attached very low down on the right side. Twelve teeth remained in the lower jaw, and were all in good order. The gold denture did not fit well, was easily displaced, and the articulation was not good. I decided, after some consideration, to anesthetize the patient and remove the flabby portion of ridge, which extended from the location of the first bicuspid teeth on each side, to obtain a solidity of the ridge. This I thought would benefit the patient by enabling me to make a better fit. Four months after my operation I had the pleasure of seeing the ridge healthy, solid and uniform. I constructed a maroon vulcanite denture, being careful to obtain correct articulation. She has been wearing it for five weeks without the slightest discomfort of any kind. Knowing that the ITEMS OF INTEREST family is composed of many of the most scientific and skilful prosthetic dentists in America, I report this case for the purpose of learning what caused this severe headache and what cured it. It is evident that vulcanite was not the cause of this trouble; but what was?

W. T. McLean, M.D., D.D.S., Cincinnati.

COMPARATIVE METHODS.

From Dental Mirror.

QUERY. *When you make partial dentures: (1) How do you obtain accurate fit around the tooth? (2) Do you use wide or narrow clasps? (3) Do you depend on the accuracy of adaptation about a tooth, or do you make a spring clasp? (4) When a tooth becomes worn by the use of a clasp, is it caused by the presence of the clasp, or to poor adaptation, allowing motion and consequent friction? (5) Have you any special method in relation to clasps, which would interest the profession?*

(1) In fitting clasps for partial denture, I first obtain cast of each tooth in Mellot's metal; measure, and make the band fit it as for crown work, then remove enough of the band to leave the clasp. (2) I use wide clasps. (3) I depend on accuracy of adaptation; also use spring clasps. (4) The clasp becomes worn by poor adaptation. (5) I line the inside of all my clasps with soft palate rubber, a very thin layer.

B. J. Roberts, Chicago.

Teeth surrounded by gold bands are destroyed by galvanic action more than by friction.

Henry S. Chase, St. Louis, Mo.

(1) Make metal cast of tooth, to which fit a ring of clasp-gold; cut out with a fine saw portion not wanted in the clasp. (2) Narrow as is practical. (3) Spring. (4) The clasp becomes worn by poor adaptation of clasp and plate, allowing friction. (5) See No. 1. *John G. Harper, St. Louis.*

(1) I do not use clasps under any circumstances. (3) I depend on good impression, and an accurate adaptation. (4) Friction.

G. W. McElhany, Columbus, Ga.

I form clasps on plaster teeth, and before soldering to plate, try them on the natural teeth and form more accurately, make the clasps as wide as the teeth will permit, and with a slight spring. In wearing the plate there must be some friction; if the clasps fit the teeth accurately the friction will not be so great. After the clasps are properly fitted and on the teeth, insert the plate with wax; press the wax against the clasps and teeth; remove the plate with the wax; take the clasp off and insert in the impression in the wax; invest and solder.

H. A. Hull, New Brunswick, N. J.

(1) By adaptation to the tooth in the mouth. (2) Wide when practicable. (3) Generally spring. (4) All clasps will wear teeth, the springy ones being, in my judgment, the least objectionable.

Aug. Bernhard, Columbus, Ga.

(1) I fit bands to teeth in the mouth. (2) Both, as case indicates. (3) Whether spring clasp or not, perfect adaptation is very important; of course, in case of bell-shaped teeth spring clasp is necessary. (4) I would say poor adaptation.

J. Austin Dunn, Chicago, Ill.

I have abandoned the use of gold clasps when I have regard for the tooth on which it is placed, as I have invariably found it to injure and ultimately

ruin it. I often, however, in partial sets (especially lower sets of molars), make bands of rubber partially around adjoining teeth, being careful not to let them interfere with margin of gum on the line of juncture of the enamel and cementum, and have found great benefit from their use without injury to the teeth.

S. T. Kirk, Kokomo, Ind.

I seldom use clasps except on gold plates and partial lower for back teeth. (1) I fit my clasp to the cast as near as can be, of medium width. (2) The accuracy of fit should be the aim, and spring clasps above all avoided. (3) I do not think any clasp can be made that will not wear the tooth, either by friction or softening by secretion, except that it be made in the following manner. For all clasp work, if I have an old dead tooth at the proper point, say the first bicuspid lower, I crown that or both posterior teeth, with gold. Before setting the crowns, however, I fit a clasp to each crown; then, with the clasps on, set the crowns; after cement hardens sufficiently, take plaster impression, remove the clasps and place in the impression made by them, and run your cast. Now burnish on your cast thin platina, in pieces that will allow of smooth work; wax these together, remove and flush coin gold over all; then replace on your cast and fit up closely to your clasps; wax these to the plate and solder. Then you have a trial plate with which to take the articulation or biter; then you can mount your teeth, using rubber or English teeth, as the case demands, lining them with plate and soldering. The clasps will drop over the crowns and hold the plate firm; and if the platina is nicely burnished on the cast it gives an adaptation that is difficult to get in any other manner.

T. S. Phillips, Buffalo, N. Y.

(1) In the old way, using round nosed pliers and what little brains I can press into active service at the time. (2) My use of a wide or a narrow band depends on the form and position of the tooth. If it is out of sight, I would prefer to use a wide band, especially if the sides of the tooth are nearly parallel, or converging slightly as they approach the gums. If the tooth continually increases in size almost to the margin of the gum, I should use a narrow band, fitting as accurately as possible the neck of the tooth. (3) In most cases I should depend on a nice adaptation of the band to the tooth; but with a tooth like that mentioned in No. 2, I should consider a little spring necessary. (4) There is always motion, and therefore, always friction, when a denture is held in place by a clasp, but I do not recall that I ever saw a tooth seriously worn away by such an appliance. I have, however, often seen them entirely destroyed by caries induced by the accumulations of food and lack of cleanliness in the person wearing such a plate.

Will H. Johnston, Brooklyn, N. Y.

(1) By the use of pliers, hammer and anvil fitting to the natural tooth, taking them, attached to the plate with hard wax, from the mouth to solder, one at a time. (2) As wide as the tooth. (3) Both combined. (4) Bearing is due to the pressure of the clasp assuredly: *a*, by friction; *b*, associated by chemical action softening the bone; *c*, no adaptation will prevent motion, because, when pressed on, as in mastication, the gum gives way which allows the clasp to move up the tooth; when pressure is removed it is forced down again by the elasticity of the compressed gum. (5) Nothing new. I

find a narrow clasp wears faster, attacking the tooth at its most vulnerable point, the neck. I file my clasps away for some distance below the gum, so that it shall not overtake the point where the mucous membrane meets the pericementum. Clasps are not needed so much as is generally supposed. I usually cut them off when the patient is accustomed to the piece. A narrow plate without air chamber, well adapted, will do for most cases. Twenty years ago I called them bar plates, now they are bridges.

Edward King, Boonton, N. J.

Use clasps for firmness and support, which cannot always be obtained by plate alone. (1) Make a pattern out of heavy tin foil; then make a metal clasp with file, hammer, pliers, etc. (2) Width and strength of clasp depend on size, shape and position of tooth. (3) Accuracy of fit most important consideration. (4) Both usually; use gold alloyed with copper and platina, and be sure of accuracy of fit. If you fail to give the clasps good fits, the patient will "give you fits." (5) Poor adaptation always allows motion.

Wm. H. Metcalf, New Haven, Conn.

(1) I obtain accurate fit by making the respective teeth of metal, thus allowing some swedging. I have also burnished thin platina around them, flowing gold over it, thus obtaining the absolute fit. (2) I usually use spring gold for clasps. (3) Use wide clasps. (4) The wearing of the natural teeth is principally caused by the pressure of the clasp, be it ever so perfect. There is always some motion to a plate, thus producing friction. (5) My special recommendation about clasps is, to use more, but insert a bridge if at all possible. If clasps must be used, I prefer to crown the teeth that are to be clasped, thus freeing them from any sensitiveness or other consequences.

R. H. Hofheinz, Rochester, N. Y.

(1) An accurate fit is sometimes an impossibility, owing to the peculiar shape of some crowns; or, if fitted, would be worthless, as it would be impossible to place and remove them. A general bearing which can be made with pliers, is all that is necessary. (2) Too wide, or too narrow (wire for instance), is objectionable, one-eighth to three-sixteenths of an inch is sufficient. (3) Both adaptation and spring; the latter essential. (4) Generally owing to poor adaptation, but sometimes to improper articulation, so that the plate is displaced on closure of the jaws. (5) Clasps should be adjusted to the plate in the mouth and not on a model. The attachment to the plate should not be more than three-sixteenths of an inch, so as to allow of freedom of motion to the clasp. To strengthen the attachment lay a bit of gold over the joint where soldered; the plate should extend a little beyond the clasp in other words, do not solder a clasp to the end of the plate.

L. P. Haskell, Chicago, Ill.

(1) By shaping with round-nosed pliers to the natural tooth; never to model or cast. (2) Narrow. (3) Depend on adaptation of band about the tooth. (4) Due to poor adaptation. (5) Nothing other than to suggest that as much of the work as can be, should be done with the mouth as a guide, using model and cast only when necessary. The bending of clasp, adjusting, final grinding of the teeth, waxing in position on the plate, should all be done to the mouth. At least, I have the most satisfactory results from such procedure.

F. T. Van Woert, Brooklyn, N. Y.

CAMPHO-PHENIQUE AND CHLORO-PHENIQUE.

Some months ago my attention was drawn to two new remedies placed on the market under the names of campho-phenique and chloro-phenique. Having procured samples, I have given both a thorough and extended test in my public and private practice, and it now affords me pleasure to add my testimony to that of so many others, to their value in practical therapeutics.

As parasiticides and antiseptics they are, in my experience, without rivals. Of campho-phenique, I can say it would be difficult to enumerate all the diseases and conditions in which I have found it to be "just the thing." Undiluted, as a dressing for wounds, burns, scalds, etc., I have found it more truly and reliably antiseptic and anesthetic than any other agent with which I am acquainted.

In dermatology, in the majority of cases, it is superior to iodoform or aristol.

It is the ideal antiseptic in the treatment of diseases of the throat and nose. Especially is it useful in catarrhal conditions of the fauces, used either as a spray or by inhalation. In gynecological practice it is also valuable.

As a non-toxic, non-irritant and reliable germicide, for washing out the cavities, chloro-phenique has no equal. I have used it in several cases of chronic cystitis, washing out the bladder thrice weekly with a twenty-five per cent aqueous solution, and in each case a cure was speedily effected, though they had previously been treated without much benefit with boro-salicylic lotions, permanganate of potash, nitrate of silver solution, etc.

In dressing wounds, burns, etc., I have used chloro-phenique gauze (made by saturating cheese-cloth with chloro-phenique), and I have found the dressings more surely antiseptic than any gauzes on the market, besides being entirely non-irritating. In the treatment of two cases of typhoid fever, with excessive tympanitis, I injected chloro-phenique well up into the colon (using a stomach-pump for the purpose), the result being a rapid deduction of the tympanitic condition.

I have used chloro-phenique successfully as an antiferment in dyspepsia, and as an injection in gonorrhea.

We should keep abreast the new remedies that are so generously thrown on the market.

—*Medical Age.*

FLASK PRESSES USED WITHIN THE VULCANIZER.

There are on the market several flask presses designed for use in the process of packing into the flask vulcanizable gums that, by spring pressure, gradually, as the prepared gum becomes plastic by the heat applied, closes the flask while it is under steam pressure in the vulcanizer. The practical advantage of so doing is generally recognized. The fault I have found with all such presses so far brought to my notice has been that there is not sufficient run to the screw by which the spring is compressed, the flask must be nearly closed before it can be placed in the press; and also that they require special flasks. Both of these objections I have overcome by the following simple and inexpensive device. The presses are made to hold as many flasks at one time as the vulcanizers they are designed for will contain; there is supplied with them for use, when less than the full complement of flasks are to be packed and vulcanized, a metal block, intended to take the place of the flasks not used. This block I have replaced with one a little more than half its height, having fitted to it a pointed screw about a half inch in diameter projecting centrally from its upper surface, and working in a hole drilled and tapped entirely through it. By this means the height of the block can be adjusted to accommodate the flask used, or to allow the flask to enter the press without undue pressure. The pointed end of the screw fits into a countersink usually found on the lower end of the screw of the press, or, where this is absent, one made to receive it. This renders unnecessary the revolving washer there found, and which may be removed, giving that much more run to the screw and increasing its usefulness. The press thus improved will hold most of the flasks now on the market. The device can be applied equally well to all flask presses intended for use within the closed vulcanizer that I have seen. I therefore deem it unnecessary to name them. I would, however, suggest to the makers—and this applies to all—that the wire on which the lower plate rests and rocks is entirely too small and weak for the service required. It should be of tough steel (not tool steel), and twice the diameter. The hole in the frame through which it passes should be sufficiently far from the end, or so strengthened as to render tearing out impossible. It is better, if either are to give way, that it should be the wire, as it is more readily replaced; it is much better, however, to have the apparatus amply strong for practical use. The pressure required to close the flask as it should be closed, even when carefully applied under favorable conditions,

is very much greater than is generally supposed, and these we cannot always command.

I do not consider it wise to vulcanize, trusting to the press closing the flask, but always open the vulcanizer and inspect the flask to see that it is properly closed, and either increase the pressure, or remove it from the press and adjust the usual screws before proceeding.

—*International.*

MAKING AN ARTIFICIAL SET OF TEETH.

We ought seldom to extract teeth, but for many reasons they are lost and substitutes must be provided. Though ordinarily these are not difficult to manage, occasionally they tax the ingenuity to the utmost. To obtain a really good impression is often difficult. Indeed, impressions for entire dentures are generally imperfect. It is usually claimed that partial impressions are the most difficult, but I believe this to be a mistake.

The best material for all cases is no doubt plaster. I cannot conceive of any condition, where an impression can be secured at all, that plaster will not be best. Some months since, a gentleman came to me for a partial plate to supply the four upper incisors and one first bicuspid. The arch was high and narrow, teeth long, loose and bell crowned; the lower teeth very long and irregular, and jaws incapable of opening wide enough for the impression cup. It seemed a "desperate" case.

First, strips of wax were placed against the lingual surfaces of the teeth, which had been previously dried. A piece of flexible card-board was cut to fit within the arch; plaster mixed quite thick, but so as to harden slowly, was then carried up into the highest part of the mouth and pressed up with the finger, then more applied to all the parts desired to have reproduced, and lastly the card-board pressed up and held in place while the plaster hardened; removal was not difficult, and a good impression resulted.

For obtaining a full impression, an examination of the mouth should always be the first move, and the finger introduced, not only to ascertain the condition of the tissues, but to try the ability of the soft palate to endure the presence of a foreign substance. When symptoms of revolt are manifested, the finger should be held in contact with the palate for some moments, the patient in the meantime being encouraged to exercise self-control; then a suitable tray selected, a piece of wax molded across the posterior palatal portion, and this introduced and held in position for a short time to further accustom the patient to the operation. A few earnest

words should be spoken to impress on the patient the necessity for co-operation and the importance of securing a good impression.

These preliminaries need occupy but a few minutes, and will often obviate the necessity of repeating the operation before securing the desired result, or the worse alternative, of accepting an imperfect and uncertain impression. The plaster now being carefully mixed, the patient sitting in an upright position, the tray is introduced, the posterior portion pressed up first and then the tray forced upward and slightly backward with slow, steady movement. Excessive protrusion of the alveolar process, especially when accompanied by a short lip, is a problem for the solution of which several plans have been offered; first, removal of the process; second, use of plain teeth placed directly against or beneath the ridge; third, plain teeth mounted with a thin rim of pink rubber; fourth, gum sections selected, ground and adjusted as closely as possible to the natural gums. The first or heroic plan is undoubtedly the best, but is seldom practiced because of the timidity of the patients; the second is objectionable because of danger of shrinkage of the alveolus, and because such work lacks strength. The third is inadmissible because of the lack of support afforded by pink rubber, and on account of the want of natural appearance, for pink rubber resembles nothing on the earth, except, perhaps, another piece of the same material. The use for which it seems best adapted is for packing joints in making gum sets, and it is certainly superior to any perishable material for that purpose.

The fourth plan seems to me the best, and appropriate gum sections will generally give good results, though not always what we might desire. Perhaps the time may come when dentists will have advanced so far in skill and ambition that each shall possess a furnace, and construct porcelain work to meet all requirements.

—Dr. G. W. Dennis, in *Illinois Society*.

THE PERICEMENTUM.

The pericementum, or peridental membrane, is that tissue which envelops the root of the tooth and fills the space intervening between it and the alveolar wall. It is a tough, strong membrane, composed mainly of fibrous connective tissue, permeated with blood-vessels and nerve-fibres, and containing traces of a lymphatic system.

It is strongly adherent to the alveolar wall of the socket on the one hand, and to the cementum of the tooth on the other, its

adherence being due to the extension of its fibres into both the bone and the cementum. These fibres, according to Prof. Black,* "are wholly of the white or inelastic connective tissue variety," and the apparent elasticity of the membrane is due to the passage of most of the fibres from cementum to wall in an oblique direction, in such a way as to "swing the tooth in its socket."

This membrane is the formative organ of the cementum of the tooth, and also assists in building the walls of the alveoli.

The cells concerned in the building of the bony walls are known as osteoblasts, and those forming the cementum are designated cementoblasts. After these cells have performed their normal function, they become encapsuled and form part of the tissue they were instrumental in building.

When re-formation of tissue is demanded, as in the thickening of the alveolar wall, or in enlarging the normal amount of cementum at various points under certain conditions, new cells are originated to perform the work. In the moving of a tooth, the activity of these new cells is at once manifested in the formation of alveolar tissue to fill the space caused by the advancing tooth.

Beside these cells of construction and repair, the pericementum also contains cells that might well be called *cells of destruction*. They are the osteoclasts or cementoclasts, and their function is to break down or absorb the cemental or osseous tissues when nature calls for such action.

In the correction of irregularities, these cells perform valuable service in removing bony tissue in front of the moving tooth.

The pericementum is thickest in childhood, when the sockets or alveoli are of necessity considerably larger than the roots of the teeth which they contain. With advancing age both cementum and the alveolar walls are increased in thickness by slow but continuous growth till the pericementum is greatly reduced in thickness, and in consequence the diameter of the roots more nearly proximates that of the alveoli or sockets.

The pericementum possesses a variety of function not often met with in any single tissue of the human system.

It retains the tooth in its socket and acts as a cushion to prevent injury to the adjoining bony structures from hard and violent concussions to which the teeth are sometimes subjected.

It affords accommodation for numerous blood-vessels which supply both the teeth and alveolar tissue with nutrient material, and for the branches of nerves which constitute it the sensory organ of the tooth, so far as tactual impress is concerned.

* *Dental Review*, Vol. I., p. 240.

It is the organ of construction and repair of both cementum and bone, and is also, on occasion, the organ of destruction of either or both of these tissues.

Its great importance in the moving of teeth is shown in the fact that without its services teeth could not be changed in their positions without serious injury to themselves or adjoining parts, and if moved would be useless, because they could not possibly be made firm in their new positions. In other words, the regulation of teeth would be a physical impossibility without the important services rendered by this periodontal membrane.

—Prof. S. H. Guilford, in *Orthodontia*.

THIRD DENTITION.

Captain William Bruce, aged eighty-two, living at 1025 Valencia street, San Francisco, has just cut his third set of teeth. The Captain is an old and well-known resident of the city, and his case has occasioned much interest.

For more than twenty years, Captain Bruce says, his gums were compelled to do the work of mastication. Between two and three years ago he began to be troubled by sharp pains in his gums, which continued at intervals day after day. He was at a loss to account for this, nor were the medical men whom he consulted able to give any explanation or relief. Finally, one bright morning, on making a careful examination, he was astonished to find the point of a white molar introducing itself for service from his tender gums.

Gradually it forced its way out, and soon began to assume respectable proportions. This extraordinary and unexpected visitor explained, in a measure, the suffering which its owner had been compelled to endure; and but for the fact that the pains continued after the tooth had fully appeared, he would have concluded that it was the only one with which he was to be blessed.

MORE OF THEM COME.

The growing process, however, was much slower than in the case of teeth-cutting with children, but it proved to be just as sure. Another molar on the opposite side of the mouth next popped out; then came a couple of incisors, then the canine teeth and bicuspid, till at last he has two shining rows of teeth as perfect, if not quite as large, as any owned by men but half his years.

The teeth made their appearance at intervals of from one to

two months duration, and, as may naturally be supposed, much merriment was occasioned among the friends of the old gentleman when word was passed around among them that "the Captain's got another tooth."

An examination shows the teeth to be firmly set in the gums, if not in their proper foundation in the jaws, and that they will, in all human probability, serve him well for the remainder of his years.

TRULY A PHENOMENON.

"The cutting of a third set of teeth, or third dentition, as it is professionally termed," said a well-known dentist recently, "has occurred only at very rare intervals. Occasionally medical or dental journals have noted cases, but the only authentic ones on record are quoted in some of the old English works on dentistry. Of the known cases, all occurred at an advanced age, and but two are recorded in which the persons got complete sets of teeth. One was that of a woman ninety-seven years of age, and the other that of a man of eighty-six years. One or two cases have been heard of in Eastern cities, but investigations have failed to prove their correctness, the actual trouble being nothing but the remains of old stumps working their way through the gums."

Captain Bruce, while being well pleased with the arrival of his new and serviceable companions, is at the same time somewhat annoyed at the prominence he has gained by their coming.

—*San Francisco Examiner.*

There are many reasons why a reamer should be used in a canal, and few, if any, good reasons against the practice. If a freshly devitalized pulp has been removed, there is less reason for a reamer than in most cases, yet by using the reamer, and by no other way, we assure ourselves that none of the odontoblastic layer is left clinging to the canal walls. In diseased teeth, of course, the reamer is a prerequisite, because it removes the softened dentine which is always present. Removal is a thousand times better than disinfection. To those who are horrified at the dangerous course here advised, we have but to say: "Gentlemen, do you enlarge the canals of roots when you desire to place an artificial crown?" and whilst they search for a reply, we remark that it is as permissible with the natural crown *in situ*, as when it has been cut off or lost. The root is pathologically and physiologically responsive similarly, to similar treatment.

—*Ottolengui, in Dental Mirror.*

DENTISTRY IN FRANCE AND IN AMERICA.

Dr. J. H. Spaulding, a former Minneapolis dentist, who has been practicing in Paris for the past five or six years, says: In France, the patient places himself more under the care of the dentist; he goes to him to save his teeth, and is anxious to have him take whatever course he thinks best. Americans, on the other hand, are apt to be dictatorial, and are often given to grumbling and finding fault with the dentist's decision. The Frenchman has a greater respect for authority and professional skill.

On one point, however, the men and women of France are firm. They will not have their front teeth filled with gold. They object to wearing conspicuous jewelry in their teeth, and insist on having none but white filling where it will show. The gold filling in the teeth of Americans is a source of no little amusement to them. They suppose it is a fad among Americans to have the brightest gold possible in their front teeth; and some of them actually believe that American women have their teeth set with diamonds.

The Frenchman's preference for amalgam and cement fillings is entirely irrespective of the cost of the materials. The French dentist charges for his services without regard to the material used. The minimum fee is the same for gold, cement and amalgam fillings, and in long operations the charge is regulated entirely by the time required.

A feature of the practice in France, which is very agreeable to the dentist, is the manner in which the patient pays his fee. The Frenchman, when he settles with his dentist, thanks him for his kindness, attention and delicate manner of operating. An American is apt to think he has done all that can possibly be expected of him when he has drawn a check for the amount of the bill. He regards the affair as a commercial transaction, which consists largely in buying so much amalgam or gold, and overlooks the intimate personal relation between himself and his dentist. In France, the manifestation of kindly feeling between dentist and patient extends to the exchange of invitations and other social civilities; and this, too, in a country where it is difficult to gain entrance to good society. The Frenchman is loyal to his dentist professionally, and in case of removal will patronize his successor, or some one whom he recommends.

Though there are a few lady dentists in France, and more in Russia and Germany, the young lady assistant so common with American dentists is rarely found. Dr. Spaulding has one in his

office, and some of his patients have expressed themselves pleased with the innovation, but others object to having a third person around. The patients sometime insist that no one shall see them at the office. Europeans in general, and especially among the less favored classes, neglect their teeth much more than Americans do.

The French dentists have a high opinion of the skill and inventive ability of their American brethren, though they consider them a little pretentious and showy in some of their methods. In the manufacture of plates, the French dentist excels the American, as that branch of the profession is developed into a specialty, and not left to apprentices and students, as in America.

"There is no other profession on the face of the earth," says Dr. Spaulding, "in which the productive years are so short as in dentistry, or the demand on the vital forces so severe and exhausting. The physician is in demand when he is fifty, but if the dentist's hand shakes a little, or if people imagine that he can't see as well as he once did, he is done for. When he is ripe in experience, he is about ready to break down. People who grumble at their dentist's fees, should remember that they are paying for ten or fifteen years of a man's life."

THE POWERS OF LIGHT.

The mysterious influence of light, on the animal and the vegetable kingdom, constitutes a study full of interesting detail, and instructive in a measure scarcely equaled in physiological research. Light, and its associate, heat, are essential to the maintenance of life.

Heat takes precedence over light, but without light the plant will lose its chloroform, its circulation will become feeble and its reproductive powers impaired if not destroyed. Without light the red blood corpuscles become abnormally flattened and deficient in hematin, the face becomes pallid and anemia ensues.

The absence of light is destructive to physiological processes in both animals and vegetables.

Experiments have demonstrated that "tadpoles were prevented from undergoing their usual development into frogs by being secluded from light."

The influence of light stimulates the cerebrum and promotes mental activity. The most casual observer has noted the contrast between the mental and physical exhilaration which is induced by bright, clear weather and the despondency of mind and physical depression caused by protracted dark, cloudy weather.

Light is a stimulant; it has a tonic effect upon the system, while darkness lowers vitality and exerts a sedative influence.

To consider in a most cursory manner the action of light in chemical experimentation and its application in photography would constitute in itself a volume.

Light acts as an important factor in the organization and development of vital bodies, and as an active agent in chemical synthesis and analysis.

Light enables the plant to appropriate dormant organic and inorganic matter from the air and soil, and by so doing vivifies it, preparing it as food for man and the lower animals.

The metamorphosis of crude elements therefore into all articles for the sustenance of animal life is dependent in no small degree on the salutary influence of light.

The tropical and semi-tropical countries exhibit in unmistakable manner the influence exerted by light, in the elaborate development of plants, flowers and trees whose luxurious foliage bespeaks in no uncertain language its activity in promoting the development of vegetation.

Light exercises a powerful influence over the functions of the human economy, either organic, chemical, mechanical or dynamical, and hence necessarily over the vegetable, animal and psychical life inclusive. This is seen in the potent influence which it exerts in causing the chemical changes essential to the production of the organic compounds for nutritive purposes; in the promotion of the formative and retrogressive metamorphoses; in giving color to the various organic liquids and solids; in aiding depuration; in exciting the senses and general nervous and muscular system; in stimulating the brain, and in promoting the healthy development, vigor and activity of the whole organism.

While conversely, it is exhibited in the fact that its absence or darkness retards or entirely suspends development and the various processes of life, and thus diminishes or checks the activity of the organic, chemical, mechanical and dynamical functions of the animal economy.

Proof of this is afforded in the imperfect or non-development of plants and animals, and of man especially; in the impairment of general nutrition, disintegration and depuration; in the torpidity of the brain and nervous system, and in the consequent inactivity of the body, dullness of the senses, inertia, and even gloominess of the mind, with more or less stupidity and disposition to sleep.

The stimulant influence of light and the sedative influence of darkness, are, in fact, so well known as to have given rise to the

common practice of excluding the light in the treatment of various forms of disease, those of the brain and nervous system especially, to thus diminish excitement, allay irritation, induce composure and quietude, and promote sleep.

—Dr. T. W. Brophy, in *Review*.

GOLD CAPS FOR BICUSPIDS.

EDITOR ITEMS:—I have read with interest a great many ways of making gold cap crowns for bicuspids; perhaps somebody may be interested in my way. After the root is ready for the crown, measure it with wire loop held securely in jeweler's pin-vise; remove the wire from the root and clip it opposite the vise and straighten, using the vise for a handle, the wire standing out from its jaws at right angle. Cut the gold plate (I prefer coin) a little wider than where a swaged cusp is used, and the exact length of wire measure. Bring the ends of band together and give it a couple of turns with binding wire, and solder with 20-carat solder over a gas jet. After the band is fitted to the root have the patient close the jaws and observe the occlusion. As the bicuspids normally come together saw-tooth fashion, the band will need filing on the posterior and anterior proximal sides; which will give a saw tooth to the buccal and also to the palatal sides of the band. Cut the band short enough on the proximal sides to accommodate the cap or "roof;" with a burnisher spread the grinding end of band till it touches the tooth in front of and behind itself. Remove from the root and swage the buccal side to take off the flattened stove-pipe appearance. Replace the band to the root, and correct if out of shape. Take a piece of gold large enough for the grinding surface and bend to an angle to fit the band; secure with binding wire and solder as before. Trim and file off overhanging edges; replace it on the root and note again the articulation. Remove to a block of bees wax, and with a good-sized excavator shank placed across the "roof" where the occlusion comes, give it a blow with a mallet and break it down. This gives the fissure between the cusps. Polish and set with any good cement.

This method is susceptible of variations to suit any articulation which cannot be said of the swaged cusps. The cusps can be made longer or shorter as the roof is steep or flat; the palatal cusp shorter, by filing more from it than the buccal. The posterior slant should be the longer to imitate nature.

In skilful hands a few trials will produce not only a useful but a beautiful crown.

J. W. Gale, Chippewa Falls, Wis.

THE PULP.

The pulp is the formative organ of the tooth, and after calcification is complete it remains as the principal source of nutrient supply for the dental tissues, especially the dentine.

It is composed of fibrous connective tissue, containing a delicate system of lymphatics and numerous nerve filaments which enter through the apical foramen. Ramifications of minute blood-vessels are noticeable throughout its whole extent, giving color to the organ and constituting its vascular system.

It bears an important relation to the teeth in their movement, because it may be readily devitalized through imprudence or lack of care. Before calcification of the teeth has been completed, the apical foramen is large and easily accommodates the pulp where it enters the tooth. After calcification is complete, the apical foramen is small, and the pulp at this point is in consequence greatly reduced. In the movement of the teeth there is often a slight mechanical constriction of the pulp at the apex, caused by the tipping of the tooth in moving. If the movement be rapid in teeth fully calcified (after the sixteenth or eighteenth year), this constriction may be so great as to cause the death of the pulp through strangulation. Before complete calcification, this is not likely to occur, as the foramen is large, the pulp has more space for its accommodation.

In the movement of a tooth in the direction of its length, the pulp may also become devitalized through excessive stretching. This has occurred at times in drawing down into line a tooth that has been retarded in eruption. In all such care must be exercised and the movement be conducted slowly.

—Prof. S. H. Guilford, in *Orthodontia*.

BE SURE OF THE RIGHT TOOTH.—EDITOR ITEMS:—Since Dr. G. W. S. Ireland, of Homestead, Md., in the ITEMS OF INTEREST for July says nothing about examining for diseased teeth in the upper jaw, in the case which has puzzled him so much, I believe the chances are largely in favor of the trouble being there. I have seen many a toothache that would yield to no treatment till all was made right in the upper jaw of the same side. Unless we examine thoroughly for diseased teeth, other than the one complained of, valuable teeth may be sacrificed without any relief. Lower teeth will at times ache when all the disease is in those immediately above them.

W. E. Driscoll, Manatee, Fla.

A USEFUL APPLIANCE.

A very useful addition to my instrument case is a mandrel five-eighths of an inch long, made by The Wilmington Dental Manufacturing Company, for the No. 3 right-angle hand piece. With paper disks, fillings may be finished with it on the buccal, palatal and lingual surfaces of molars, and with soft rubber discs these surfaces may be polished after the removal of tartar. As it runs parallel with the hand piece, cavities or fissures can be followed up and extended partly or fully across the crowns of molars by the use of a small diamond disk, and proximal cavities may be connected in molars or bicuspidis without waste of enamel edges. A groove can be cut the thickness of a thin diamond disk and enlarged to suit the case in hand. In many ways I find it a useful addition to my hand piece attachments, saving much time, and easily accomplishing results that have heretofore been tediously and unsatisfactorily done with enamel chisels. *E. N. Francis, Uvalde, Texas.*

CROWN WORK.

For securing the measure of roots an instrument can be used shaped like a pair of small pliers, the point of each half being split and having a ring on it, forming a miniature clamp. A piece of tagger's tin is cut about the desired length, and wide enough to rise a trifle above the end of the root. The jaws of the pliers are clamped on this, and by compressing the handles the tin is drawn around the root and the measure quickly and accurately obtained. Gold crowns are too well understood to need more than passing notice. My own preference in constructing them is, on the score of strength and simplicity, to cast the cusps, then fit and solder the band. For the anterior teeth, there is no all porcelain crowns not open to serious objection. Probably a few years hence dentists will be wondering at the blindness that allowed them to mount Logan, or any other porcelain crown, with cement; especially with an entirely unprotected joint between root and crown. Many valuable roots are thus each year being put in a way to be lost. Amalgam is undoubtedly (in a general sense) the best material now in use for mounting crowns. The discoloration at the gum line being the principal objection, which may generally be obviated by making the joint in front a little above the margin of the gum, or by using a band, and double strength is thus secured; as the filling

of amalgam not only protects the root from decay, but greatly strengthens it. The Howe four-pin crown has been in use for several years by me, and gives great satisfaction when set in the following manner. It will be remembered that the pins are long and are to be bent around a post which is by the inventor intended to screw into the root. Instead of this I use a flat or three-sided post, enlarge the root at the orifice as much as it will bear, and sloping to follow the shape of the root, enlarging but slightly at the last third. The tooth is nicely ground to fit the root, and to occlude properly with its antagonist; the post sharpened, slightly barbed, cut proper length, and marked, the pins are then bent tightly and fastened to the post with a small quantity of solder. If a band is used it is now adjusted and the crown fitted to it, a small quantity of oxyphosphate inserted within the upper third of the canal, and the post pushed entirely up to place and held there till the cement sets; then a plaster investment is formed over the adjoining teeth and the crown itself. This will harden sufficiently in two or three minutes, when the surplus cement, if any, is removed with delicate instruments and a good quality of amalgam forced up into the root, and the lingual surface of the crown faced up with the same. This will be polished, of course, at a subsequent sitting.

—Dr. G. W. Dennis, in *Illinois Society*.

REMOVING NECROSED BONE.

On Tuesday afternoon, Dr. R. B. Foster, of Grand Forks, N. D., performed successfully a surgical operation on Mr. Sullivan, a farmer of East Grand Forks, that is a little out of the ordinary line of dental work. Five years ago, Mr. Sullivan was kicked on the chin by a horse with such force as to drive the teeth together, causing a fracture of the process of the upper jaw. At the time Mr. Sullivan did not pay much attention to it. Since then a portion of the jaw had become necrosed. A few days ago, while in attendance at the murder trial at Crookston, Mr. Sullivan consulted two physicians, and was told that he was suffering from neuralgia. Not being satisfied with the information received at Crookston, Mr. Sullivan came to this city and consulted Dr. Foster, who on a careful examination discovered a piece of necrosed bone caused by the injury. Dr. Foster, at once commenced to remove a tooth and the dead bone, which was taken from the jaw in several small sections. The doctor says his patient will come around all right in a few days.

—*Herald*.

REMOVAL OF PULP WITH COCAINE.

Doubtless every practitioner has experienced unpleasant results and delay in attempting to devitalize pulp with preparations of arsenical paste. To all those who have not yet given it a trial, I would recommend in the place of arsenious acid a twenty per cent solution of muriate of cocaine. Have it prepared in small quantities, as it is more reliable when fresh. I have successfully removed the pulp with a four per cent solution, but less time is required if a stronger one is used, and twenty per cent seems to answer very well. Apply the rubber dam, and cleanse the cavity as well as possible without causing pain. Saturate with the solution on a pellet of cotton, and after a few minutes carefully and thoroughly expose the pulp. More cocaine is applied, and with care it may be worked down the canal with a broach till the apex is reached without much pain. The pulp can then be painlessly twisted out with a broach on which are wound a few fibres of cotton, canals dried with hot air, filled with chlora-percha, and the operation completed at one sitting.

Chas. C. Patten, D.D.S., Machias, Me.

One of the greatest achievements ever made in dental surgery was performed recently by Dr. George H. Perine, dentist, of Summit, N. J., for a lady residing in New York City. Through ulceration of the teeth, and sloughing of most of her upper maxillary and palate, she was unable to articulate, and for some time had taken nothing but spoon victuals. After removing all the remaining caries, there was an opening in the roof of the mouth through which two fingers could be passed up quite into the *antrum*, or cavity behind the face.

Dr. Perine made a series of casts, which, by careful juncture, represented the abnormal formation, and from these constructed an artificial roof and palate, on which to base the entire alveolar process and teeth of the upper jaw.

We saw the patient before anything had been done for her. The sight was deplorable. Below the nose every semblance of humanity was gone, and it was impossible to understand a word the sufferer tried to utter. Quite recently we saw her again. The utterance and mastication were alike perfect, the contour of the face entirely restored, and the lady, it scarce need be said, too jubilant and grateful for her restored speech to express.

—Record.

NECROSIS OF THE ALVEOLUS.

I have just completed the cure of a case of "Necrosis of the Alveolus," and thinking that it might interest some of your readers, I give you the history of it.

About four months ago, Mayor Wells, of Boone, came into my office with a fistulous opening nearly as large as a pea. It was situated below the root of the left lower central, opening on labial surface. The pus was flowing from it constantly. As the tooth was dead and loose, I extracted it, thinking that would produce a cure. Three months later, however, he came back accompanied by his physician, and with indications of a much more serious trouble than at first suspected. He had gone to one surgeon who shoved a lance through the gum, and gave him no further treatment. Still the case grew worse. He then went to another physician who brought him to me for treatment.

Examining through the opening with a probe, I could feel the honey-combed state of necrosed bone. I first made an incision about an inch in length, reaching from above the opening to the base of the alveolus. I laid the tissues back and scraped the jaw and socket thoroughly, till I could feel sound bone under the probe.

I then flooded the cavity with pure carbolic acid, carefully protecting the lips, and filled the cavity with cotton dipped in campho-phenique. For the first week he came to me every day and I changed the cotton, after washing out with peroxide of hydrogen. Once or twice during the treatment, I burnt the socket with the acid, so as to induce more granulations and not leave a depression just back of the lip.

The flow of pus stopped in about four days after the operation, and to-day there is no sign of trouble.

J. P. Collins, Boone, Iowa.

Whatever one may think of Dr. Brown for figurative oratory, he is a hard man to beat with his fingers. We have lately seen some of his practical bridge work, and though we were at first somewhat skeptical, we do think, for artistic and clean and strong work, as placed in the mouth by him, it excels anything we have met. It requires a skilled master to make it a success. Does it not in all departments? Every man to his own work, in that he can excel. What is needed is the stimulation of a laudable ambition. We think there are those among us that are aiming higher. Let us give them our generous attention.

—Dental Review.

SAVING A NERVE.

The following instance of saving a nerve is given by Dr. Morrison, of St. Louis :

It was my misfortune, in 1861, to have a bicuspid exposed on its distal surface in its excavation. The dentist in charge of the case decided that I had better have the tooth extracted, as the pulp was badly exposed; that it was impossible to put a filling of any kind upon it; that if the pulp was removed the tooth would be destroyed and lost in a very short time, and that I had better submit to its extraction immediately. I called a halt on that.

A year or two before that, Dr. Atkinson, of New York, recommended the capping of exposed pulps with oxychloride of zinc. The excavation of the tooth was a painful proceeding, but after a consultation it was decided to cap it with oxychloride. I sat under the operation, and did not have much to say, but wanted to have the tooth preserved if it could be done. They made a paste of the oxychloride after making a dressing of old-fashioned German wood creosote and applying it to the cavity. The oxychloride capping was applied, and it was one of the most intensely painful operations I ever experienced. I nearly turned a summersault out of the chair, and came very near going out through the window. A little while after that a gold filling was made over the oxychloride capping, and that filling I wore for eight or nine years, and that tooth has always been sensitive to thermal changes. Eight or nine years after I had it refilled with gold, the dentist who performed the operation, instead of making a good contour filling, made a flat filling, and there was obstruction to cleansing or cleaning the tooth with a toothpick at cervical space. I had that gold filling removed, and another one put in its place. This work was done so thoroughly that a fracture occurred in packing the filling in, and the tooth was sensitive for more than two years. After that every time I closed my teeth I felt there was something wrong with it. Nearly every dentist whom I could interest in the matter examined it, and I got the opinion of each one. It was pronounced all right; at the same time I knew there was something wrong. One evening while eating some oranges the inside cusp of the tooth came away, leaving it much more comfortable. I had the remaining external cusp ground shorter, and I am now wearing a metal shell over the tooth. It was capped thirty years ago; it was then condemned and said to be beyond all hope of preservation; it is alive to-day; it is not so sensitive to thermal changes, because there is such a large metal coat over it.

—*Dental Review.*

IS IT QUACKERY?

[The following would have appeared last month, as referred to in an editorial, but for a mistake.]

The dental world, of St. Paul, has been and still is passing through the heaves and swells of a private earthquake.

A few months ago Dr. Hale, whom we are informed is a respectable dentist of St. Paul, announced the discovery of a remedy by means of which the most sensitive teeth could be filled, *absolutely without pain*. Following this announcement came his removal from the outskirts of the city into handsome down-town offices, where he runs five chairs, and at once draws the best business of the city, besides selling the right to use his panacea to one dentist in each of several other cities, at from one to two thousand dollars.

Just as the dentists were recovering from this shock, Dr. S. A. Bucher, an old and reputable dentist, also of St. Paul, claimed the discovery of something as good, or better, or just the same as Dr. Hale's, which he would freely give to his brother dentists and their suffering patients. The presentation ceremonies, however, did not materialize. In its place appeared a committee, who demanded a note for \$50.00, due in ten days, for which they promised that sometime a clinic should be given, and the formula divulged to such as had paid their notes. Some ten or fifteen, out of over sixty dentists, gave their notes. The clinic was appointed, but again the conditions were unfavorable, and in place of the clinic we were informed that a stock company had been formed, with Drs. Bucher and Hale, of St. Paul, and Dr. Lenox, of Minneapolis, at its head.

It has leaked out that these discoverers got their start from an article published in ITEMS OF INTEREST for July, 1890.

CONTOURING.—Of course I do not oppose full restoration when there is unquestionably strength enough in the remaining portion of the tooth to hold the filling. Many of our dentists are now teaching and practicing the entire restoration of the natural shape of teeth that, in my judgment, are too frail to long retain the fillings. It is this practice that I oppose, for it is misleading and tends to unsafe results.

The leverage force in the pressure of mastification on the extreme edges of many of these fillings is so great as to sooner or later force them from their inadequate moorings. Contour fillings are artistic and are allowable when not carried beyond proper limits.

Dr. W. W. Allport.

WAS COCAINE THE CAUSE OF THIS DEATH?

Miss X. called on the 7th of August to make an appointment for the following day, Friday, at seven o'clock, A. M. On that day I proceeded to extract two superior teeth, after having made two external and one internal subcutaneous injections of a solution (cocaine) of 1 to 100—*au centième*; the teeth were very loose and the success was complete. After several minutes my patient expressed a wish to have another tooth in the left inferior jaw, and equally as loose as the others, extracted. I injected the rest of the cocaine in my syringe, and after waiting a few minutes extracted the tooth. The wound did not bleed. I gave the patient a little warm water and a little black coffee to induce the flow of blood. Nothing appeared to indicate an accident; the patient seemed to be all right, although somewhat fatigued. I left her in the care of her uncle while I went for more coffee.

On my return the young lady had fainted. She was placed on the floor, her clothing loosened, dashes of cold water, friction,—in short, everything was done that the situation indicated. The physician, hastily summoned, continued the same treatment, and, in addition, gave nitrate of amyl, oxygen, and subcutaneous injections of ether; but the patient succumbed after a half hour of unsuccessful treatment.

The physician who made the death certificate, after describing the fainting of the patient, concluded that death was caused by cocaine, as that salt had been employed.

Was cocaine the cause of death? I will prove the contrary.

When the honorable doctor incriminated cocaine he was ignorant, as I was myself, at the time, that a large knotted cord, called *corde à lessive*, was wound four times around the body of the girl, compressing the thorax. This cord was drawn so tightly that its presence was not suspected and could not be cut without injury to the skin.

This explains why the attempts at artificial respiration were unsuccessful.

—M. Bouchard, in *International*.

The public should receive instruction in the hygiene of the mouth—that cleanliness is indeed next to godliness.

Dr. Osmun.

THE ITEMS is to me a journal of much value. It is always a welcome visitor, and its pages are read with pleasure and profit.

W. J. Jameson.

INFERIOR TEETH.—EDITOR ITEMS:—Why not call things by their right names at all times? In the advertisement of W. D. M. teeth, in July number of ITEMS, it reads, “Lower gum sections,” instead of “inferior.” This is right. A short time since a lady, while looking over some back numbers of ITEMS that laid on my table, remarked: “Doctor, I hope that you do not use any of these inferior teeth that I see advertised here.” I assured her that I did not use “*inferior teeth*,” but did not explain further, for I was too busy just then.

G. W. Clutter.

EDITOR ITEMS:—I have a combination plate that I made in 1864. I have made similar plates by hard soldering staples and pins to the gold plate for the vulcanite to fasten to. But that was too much trouble, and there was danger in warping the metallic plate, so I adopted the plan of merely dropping soft solder on the plate, then filing the base of each little teel away so as to leave a head. Of course, to do this the metallic plate must run up onto the alveolar ridge far enough to solder to it.

J. W. Greene, Chillicothe. Mo.

MAKING A NEW EAR.—EDITOR ITEMS:—As it may be of interest to your readers, of whom I am one, to know how I restored the lower portion of an ear, that was bitten off four years ago by a dog, I will explain the *modus operandi*.

The lobe of the ear as high as the external opening and the base of the helix was lost.

So I took at first a plaster of Paris impression of both organs after I had closed the opening with cotton, oiled the surfaces, and protected the hair by paper with the necessary opening for the ear.

The casts being made, I built up the lost portion with wax, taking the opposite organ for a pattern. To try it on, I attached it with very sticky mucilage. After having satisfied myself about the correctness of its form, I removed it and bent a gold and platina wire to pass just behind the ear, showing in front a little above and below, where it entered the external opening. To this wire I soldered a piece of stiff flat platina, punched holes through its free end which was to be the attachment for the artificial lobe.

This being done, I re-attached the piece, at the same time pressing it against the platina plate, which readily entered it. Now I removed carefully the whole and substituted white rubber, which was vulcanized and then given a life-like appearance by the hand of a skilful oil painter.

Dr. H. Müller, Graz, Austria.

COMBINATION PLATES.

The several items in THE ITEMS in regard to what I have said about the "Chase Combination Plate," seem to result from a misapprehension of the case. The patent in the above combination is not *in* the combination plate the peculiar method of *attachment*.

The combination of continuous gum and rubber was made by many dentists after the introduction of rubber. In 1863, Dr. John C. Fuller, of Chicago, took out a patent for it. Dr. Allport, in an article in the *People's Dental Journal*, published the statements of many dentists, East and West, who had made several years previous the same thing, but had abandoned it as worthless. Within the last six years it has come to the front again as a *new* invention.

L. P. Haskell.

FILLING THE BUCCAL SURFACE OF THIRD MOLARS.—EDITOR ITEMS:—On page 423, ITEMS for July, five dentists reply to "Question 17" in such a way as to surprise me. I do not hesitate to say that with gutta-percha to occupy the cavity to upper edge of the gum, and then cement and platina alloy combined to finish, a more durable filling can be made than with gold. I know of a filling made of gutta-percha in such a position that has remained perfect for sixteen years. If the grinding surface is not involved, nothing but gutta-percha is needed. And as to keeping such cavities dry for introducing gutta-percha, I often do so. I use a small thin napkin held down by a napkin holder made of German silver wire, that is so shaped as to hold the napkin down on both sides and around the back of such teeth. *W. E. Driscoll, Manatee, Fla.*

In so far as the aims of dentistry are benevolent, its investigations and studies confined to vital organs and functions, and its culture broad, liberal, and scientific, it is a profession. In so far as it deals with practical and mechanical operations, with the training of the hand to execute, and in much of the daily routine of the office, it is an art or trade. It approximates one or the other as it meets these tests; and I am sure neither can be left out of the fully-rounded dentist. But I am as fully convinced that a knowledge and skill that will execute in a workmanlike manner the various operations he is daily called on to perform, is as essential, at least, as a knowledge of the metacarpal bones or the quadriceps, extensors; and if he lacks the former qualification he certainly will be a failure as a dentist, even if he possesses, to a high degree, the latter acquirement.

Dr. J. A. Osmun.

Advertising lotteries is prohibited by the Post-office Department, and yet dentists make lots of money on draw games.

A plan that never fails to give a natural bite in taking articulations for artificial dentures: Have the patient open his mouth, and before closing tell him to place the tongue on the roof of the mouth and keep it there while closing. Try it yourself, it can not fail.

W. Goodfellow, Sussex, N. B., Canada.

In the ordinary labial cavities of incisors, cuspids and bicuspids the following practice, when possible, has been satisfactory: Excavate the cavities, dry and fill with gutta-percha, pressing it well up against the gum and allow it to remain two or three days. The gum will then be found nicely pressed back and cavities well exposed, so they may be filled with soft foil, using rubber dam or napkin.

C. C. Patten, D.D.S., Machias, Me.

I have a suggestion to make in regard to the ordinary fissure drill. When it is worn considerably, if you will grind off the end diagonally, on an oil stone, giving it a curve, little spurs will stand up along the edge of the ground surface at a sharp acute angle. For entering a fissure or extending it by drawing the rotating end back and forth over the edge of enamel it will be found very effective. It has been very satisfactory to me, and it is very easily sharpened.

Dr. Case.

FRIEND WELCH:—It would be difficult to find a combination of three words expressing more truth than the three comprised in the title of your peerless dental journal, the ITEMS OF INTEREST.

I have only been a subscriber since January of this year, but to-day, if I had to choose between the ITEMS OF INTEREST and all, the other journals with which I am acquainted, I should retain the ITEMS notwithstanding the great value of some of the others. No busy dentist who has a desire to improve on his present attainments can afford to do without it.

I have, however, one criticism to offer: it should be issued weekly instead of monthly, I would be glad to subscribe to a weekly edition at ten dollars per annum.

E. D. Eddy, San Mateo, Cal.

A very good way to clean burs, when the shafts get somewhat discolored with rust, or otherwise, is to put them in a paper box, with a small quantity of pulverized pumice; after a few minutes of rapid shaking change the pumice for common wood sawdust, which removes all traces of pumice and leaves the burs clean and bright.

C. C. Patten, D.D.S., Machias, Me.

I would like to give my answer to Question 17 which appeared with answers in the July ITEMS OF INTEREST. Prepare the buccal cavity and fill with amalgam—any one can do this with napkins, spunk, etc. Now drill a vent hole through the masticating surface and dismiss your patient. At next sitting, open up the masticating surface to get at the roots—put on rubber dam with a clamp now “treat at your leisure. *N. J. Goodwin, Hartford, Conn.*

EDITOR ITEMS:—I notice an article in your July ITEMS from A. K. Dice, of Walla Walla, Washington, concerning the requirements for graduation in our dental colleges as adopted by the National Association. I heartily endorse his opinions, and think that when one has been in practice for several years he should be allowed to enter the class his ability and qualifications merit; and, if he does not care to take the three years' course, he can come to Ohio, after he has been in an office a short time, and open up and practice regardless of dental law. He need not have any fear of the State Board molesting him, most especially if the one practicing without a diploma should have a relative in the Ohio College of Dental Surgery.

H. C. Kerns, Sidney, O.

It is becoming evident that if we are to depend on the operation of dental laws to elevate and maintain the standard of professional excellence, the scope of their operation must be enlarged so as to secure effective supervision of the qualifications of those who matriculate in the colleges, and also of those who are graduated from them. It seems reasonable to suppose that the authority of the State could be made effective with greater certainty and usefulness on the teaching of students and the qualifications of those who enter the profession through the colleges, than on the few who, having no diplomas, wish to remove from one State to another, or to enter on practice by an examination before the State boards. Both the last-named classes are few, in comparison to the graduates, and incapable of lowering the general standard to any great degree.

—Dr. Edmund Noyes, in Review.

Monthly Gossip.

BY WM. E. BLAKENEY, D.D.S.

HEADACHE is the result of eating too much and exercising too little.

THERAPEUTICALLY considered, gold is the most uncertain filling material.

TEETH are much like verbs in that they are regular, irregular, and defective.

WHITE DECAY and brown decay of teeth are processes not differing in kind but only in degree and in rapidity of destruction.

MULTUM IN PARVO.—“The correct packing of gold is, in truth, an art of itself, and requires an educated touch and correct eye.”

Dr. George S. Allan.

BLACK maintains that the chemico-parasitic theory, without a reasonable doubt, gives the true explanation of the etiology of dental caries.

WE WOULD like to know whether weighted rubber is more irritating to the gums than ordinary rubber. A late trying experience suggests the inquiry.

THE DOCTOR or dentist who demands exorbitant fees because his patient happens to be rich is guilty of infernal robbery. That's the fact in plain English.

IT IS A CURIOUS FACT that among all persons who consult physicians, believing themselves to have consumption, in only a very small per cent are the lungs found to be affected.

“TO HIM WHO WORKS in the right direction,” says Dr. E. S. Talbot, “all things are possible, and the higher he places the limit of his attainments, the greater his attainments will be.”

DR. S. WEIR MITCHELL, the specialist on nervous diseases, is a busy physician. He does an immense amount of work in the hours of rest from professional labors, yet he has no nervous troubles himself.

IN CARING FOR THE TEETH the simplest remedy is decidedly the best. A little prepared chalk, white castile soap, and a brush that is not too stiff will, if brought into use morning and night, clean the teeth and at the same time harden the gums.

IS IT POSSIBLE TO TREAT and fill at one sitting a devitalized cuspid, with alveolar abscess of three years' standing, and be reasonably

sure that it will not give the patient further trouble? Will any of the readers of the ITEMS kindly answer?

THERE IS SOUND ADVICE in these words of Hugh White: "When you make a mistake don't look back at it too long; take the reason of the thing into your mind, and then look forward. Mistakes are lessons of wisdom; the past can not be changed: the future is yet in your power."

WHEN THE BRAIN IS IDLE it degenerates as the muscles degenerate in consequence of disuse. The least vigorous and active brains are to be found in the two extremes in the social scale, the very wealthy and the very poor; while the middle classes furnish examples of the highest brain development.

THE OHIO JOURNAL OF DENTAL SCIENCE says: "An artificial rubber has been invented which is being carefully tested by the electricians. It is made in five varieties, three soft and elastic, like soft rubber, and two hard and elastic, like wood and ivory. It burns with difficulty, and is black, brown or dark blue in color."

DR. J. TAFT believes that the great majority in the profession are strangers to its early history, struggles and difficulties, and that "to help form the professional character, and views of the students, each college should provide for two or three lectures on the early history of the profession and its great men—Harris, E. Parmly, Flagg, Tucker and others."

A CONTRIBUTOR to the *Ohio Journal of Dental Science*, has discovered that "people seem to become almost as much attached to their dentist as to their family physician." We can imagine no earthly reason why a physician should have more respect shown him by families who employ him than the dentist whose profession is equally respectable, and whose services are equally important.

AUTHENTICATED ACCOUNTS of a most remarkable freak of nature were brought to this city, in July last, by Mexican newspapers. The phenomenon consists of a little girl, three years old, who is formed in the usual way, except that a second face has made its appearance on one of her thighs. If you compress the cheeks of the face, it opens its eyes. The mouth has three teeth, but the nose is missing.

GEO. W. WELD, M.D., D.D.S., read a paper before the New York Odontological Society, from which we extract the following passage: "I am unable to find any authority, and I know of no good reason, for believing that the secretions of the salivary glands in their normal alkaline state can be rendered acid by the ingestion and absorption of acids by the blood." The doctor believes "the mineral

acids are stronger and more destructive to enamel than any of the vegetable acids."

"WHAT IS A MAN TO DO?" is the pathetic inquiry of "Xeno" in the *Dominion Dental Journal*. That depends very much on his surroundings—what he is capable of doing, and the push with which nature has supplied him. As a rule, if a man is correct in his habits, industrious, keeps a clear conscience, and says his prayers before going to bed, his doings are above criticism. Do right, "Xeno," and you'll come out all right.

DR. GEO. S. ALLAN, of this city, read a paper before the Section of Dental and Oral Surgery of the American Medical Association, held in Washington, D. C., in May last, entitled "The Genesis of Contour Filling," which is brimful of useful information, and richly deserves a prominent place in dental literature. Dr. Allan knows just what to say and how to say it. The paper is published in the *International* for August, and should be carefully read by every dentist.

A LOVER OF ANTIQUITIES in Odessa has acquired some archaic treasures which were dug from the soil of ancient Olvia, now the village of Parcotine in Kherson. They consist of alabaster of exquisite workmanship. They seem to belong to the time when the arts of sculpture and engraving were in their bloom in Greece. The Russian papers regret that such antiquarian treasures should be kept in a private house instead of in a public museum, where the student and the artist could freely examine them.

MANY OF THE SO-CALLED cases of malarial disease are nothing more than self-poisoning, due to the system choking up with waste material. If, in such, large quantities of hot water are taken every day for two or three days, so as to flush and wash out the system, much greater good will be accomplished than by the use of drugs. If sufferers from constipation will drink two tumblerfuls of hot water every morning before breakfast, and again on going to bed, they will rarely need cathartics. We speak from experience.

When the first permanent molar is erupted, it is well to cut away considerable of the temporary tooth, if it is decayed on the distal surface, to prevent decaying of the first molar on the anterior proximal surface. I believe in attempting to save the pulp of the first permanent molar. It can be more surely done at the age of ten on to fifteen than later. A large exposure in a first molar is much more readily treated at that age than a smaller exposure at a later period.

Dr. Ottofy.

Our Question Box.

WITH REPLIES FROM OUR BEST AUTHORITIES ON DENTISTRY.

Address all questions for this department to DR. E. N. FRANCES, Uvalde, Texas.

Question 19. *A lady twenty-three years of age had nervous prostration four years ago; at present quite nervous; recently had two small proximal cavities in her upper lateral filled with gold. The tooth ached at times; the gold was removed and replaced with oxyphosphate, making some improvement, but the tooth aches three or four times a week, from five minutes to two hours. The tooth is not sensitive to thermal changes, has no regular time for aching, and nothing in particular seems to start it. What shall I do with the tooth?*

I think this a plain case of reflex action, dependent on some other cause than the tooth in question; possibly the metal filling might have aggravated the trouble, but is not the prime cause.

George S. Staples, Sherman, Texas.

I should remove the cement filling, cap with sterilized spunk, and fill with gutta-percha. If pain does not cease with the first application, use a small particle of sulphate of morphine in combination with sterilized spunk; repeat the application if necessary. *J. E. Cummings, Syracuse, N. Y.*

As the tooth did not ache before filling, I should think there had been some metallic action, which had caused a little disturbance or inflammation of the pulp, thus producing pressure on the artery and interfering with the circulation. I should recommend counter-irritation over root of affected tooth.

W. J. Jameson, Thomaston, Me.

I would treat with stimulation and sedation; zinc, capsicum and wine of opium, equal parts, painted on gums or applied on pad, and recommend out-door exercise, with anticipation of better tone. Failing in this, I would devitalize by arsenic, and fill canals and finish with gold. The trouble may be reflex from ophthalmic or inflammatory dental irritation, or sympathetic from eruption of wisdom tooth.

W. E. Andrews, M.D.S., Tremont, N. Y.

It depends on the condition of things at the time they were filled, without considering the constitutional condition of patient at all. In all probability these cavities required local treatment previous to filling. These cavities being filled as they were, and giving pain after the operation, does not warrant a diagnosis as a result of the patient's nervous prostration, but simply the proper care in the treatment and filling of tooth.

J. H. Grant.

You have given a hard one, and unless I was to answer in a lengthy theory of complicated neurosis and over-stimulated membrana eburna, I fear I

would not be understood. If you will question your patient closely I think you will decide that the pain she terms toothache comes on suddenly—somewhat sharp and lancing; and that the tooth is uncomfortable or sore for one, two or six hours afterward. These pains are likely to come during the hours of change of temperature, say from 7 to 10 A. M., and from 8 to 10 P. M. I think you would have the same trouble if the cavities were filled with gutta-percha, or even left open. I should like to hear more about that lady, aged twenty-three, and I think I can tell, after you have questioned her, the pathological trouble and the prognosis under wise treatment.

O. B. Love, San Antonio, Texas.

Though perfectly willing to serve you I do not feel like going into a discussion of the question. It involves too much time and space, and the diagnosis is too obscure. I had a patient some years ago that gave me much trouble and anxiety. The patient was an attractive young lady about twenty-seven years of age, with a remarkable set of handsome, well-developed, sound teeth—little or no decay in any of them. She had a violent attack of nervous prostration, supposed to have been caused by malaria, and finally paralyzed on her right side. She laid in bed almost insensible for fourteen months. When she recovered she was suffering intensely in all of the teeth of the upper jaw, and on close examination I found every other tooth dead, pulps devitalized, and a partial necrosis of the roof of mouth. She suffered some time, as her condition prevented an operation; but the devitalized teeth were finally removed, also a portion of the hard palate. This relieved her for a time, but the remaining teeth lost their vitality, and were removed with a large portion of the hard palate. She lived seven or eight years in a state of comparative ease and comfort. She came of a scrofulous family. Her physician, a gentleman of high standing in his profession, came to the conclusion I did—that the affection of her nervous system had impaired the proper nutrition of the teeth and surrounding maxille. Now the tooth you speak of may be an indication of nervous trouble; it may be exostosed, developing pulp nodules, or rheumatic from malaria. You could arrive at definite conclusions only through the most thorough and exhaustive differentiative diagnosis. If the case were mine, I would first use quinine and strong tonic treatment; then use the usual treatment in rheumatism, salicylic acid or wine of antimony; then isolate the tooth by rubber and apply cold, which, according to my experience and others, would give indication of pulp nodules; lastly, would open into tooth and find out the condition of pulp, etc.

R. B. Winder, Dean Baltimore College Dental Surgery.

Question 20. (1) *What is your method for fitting very flat mouths?* (2) *Did you ever use soft rubber around upper part of ridge, on labial side, for suction?*

(1) A perfect impression in plaster of Paris. (2) No.

J. E. Cummings.

Secure a perfect fit and use thin air chamber. I think faulty occlusion or articulation the cause of much trouble on account of falling plates.

W. E. Andrews, M.D.S.

Thoroughly trim your model till all the pressure is removed from the hard parts of palate. This nearly invariably insures a fit or suction. Never used soft rubber for suction, and, if for no other reason, I would not use it because it will certainly disintegrate in a few months at best.

Geo. S. Staples.

I have had no difficulty in making plates for flat mouths. Generally resort to the same method as to other cases for upper maxilla. In the lower I have had to resort to the Weston metal base to get weight, to give satisfaction. Have never resorted to soft rubber in any case during my practice.

J. H. Grant.

Mix plaster stiff as possible to get a perfect impression. The stiff plaster forces up the softer membrane, and is better than any carving. Arrange and place an ordinary sized air chamber, then cut from a sheet of No. 40 or 60 tin foil a piece large enough to cover the entire plate to enter edge of ridge, and about three-eighths of an inch short of the length of plate behind. Carefully burnish to model, avoiding any folds. This practically brings extra atmospheric pressure over the entire palate of plate. Remove after vulcanizing. Don't think soft rubber would prove satisfactory. *O. B. Love.*

It depends on the condition of the palatal bone. If as in 98 per cent of mouths—that are hard, and the only part that does not change or yield to pressure—I relieve the plate by a thin film of wax over the hard portion of the cast. In rubber cases I scrape or bur the surface of the plate. In about 2 per cent of cases the palatal surface is soft, and usually accompanied by a crevice. In these cases I make no change, but let the plate come in close contact. I have on my shelves a large number of these very flat cases, on which continuous gum or gold sets have been made, with no vacuum cavities, or only the change suggested above. There is no need of soft rubber around margins of plate, and it is uncleanly. *L. P. Haskell.*

My method is to obtain a perfectly accurate impression. This can be done with modeling composition or plaster—I prefer the former. Then carefully examine, by the sense of touch, the mouth, and find any hard parts of the surface that may be present; then scrape the impression in accordance with these hard portions. I have never used soft rubber on labial surfaces, nor would I do so, because of its becoming so filthy in the mouth; nor do I ever use vacuum cavities. If the ridges are hard I scrape my impression at that point. In other words, I scrape the surface of impression wherever the plate is to be adjusted, whenever I find a hard portion or spot in the mouth, so that the plate can imbed itself in any of the soft parts that are left. Vacuum cavities—so called—are really air reservoirs till the membrane adjusts itself to the cavity, then it does exhaust the air. The reason the vacuum cavities so often aid the dentist in the first fit of plate is because the hard part of the upper jaw is most constantly found in the median line. Of course, if the cavity is placed in that part of the plate, it relieves the plate from pressure at that point, and enables it to adapt itself to the soft tissues, thereby removing the air and producing suction. *W. B. Winder.*

Question 21. *What is your mode of treatment for caries of the maxilla? The teeth are all gone and a small portion of the bone is diseased in the region of the cuspid eminence.*

Use chisel and burs and clear the parts of the dead bone.

Geo. S. Staples.

Inject dorsenia 1 grain with hypodermic syringe; open up gum with scalpel, remove spicula, and keep thoroughly cleaned with carbolic solution, pyoctannin, or listerine.

W. E. Andrews, M.D.S.

Inject cocaine; open freely and drill out dead bone with large bur in engine. Wash thoroughly with antiseptics, and if done thoroughly nature will do the rest. The younger the patient the more rapid the recovery.

J. E. Cummings.

Caries of bone are generally successfully treated by removal; opening through the sinus and taking or cutting away all soft and disintegrating portions of bone. Aromatic sulphuric acid is a favorite application. This case from its locality may or may not involve the antrum, and should be treated accordingly.

R. B. Winder.

I should make free incision along alveola ridge and down cuspid eminence, carefully lift the gum from maxilla, and remove all dead or necrossed bone with suitable engine bur. Syringe with quite hot water and bring the flaps to place. A few stitches should be taken to hold the parts in place, that the wound may heal by first intention.

W. J. Jameson.

Treatment as to this simple case—and it is not an unusual thing in my practice—is to remove all portion of diseased bone down to that portion where there is a healthy periosteal membrane, and without any extraordinary treatment, only the antiseptic wash, you generally have a healing by first intention and that rapid.

J. H. Grant.

Gain free access and clean well with peroxide of hydrogen. Cut away all dead bone—the peculiar difference of feeling, of dead bone and live bone, with good judgment being your guide in cutting—dress with listerine, and let stay one day. If there is further pus formation, use aromatic sulphuric acid, full strength, freely and persistently.

O. B. Love.

AFRICANUS.—On examination of your model, we find it a very simple case that nature will usually correct (unless hereditary), and the appliances, if any need be used, are so simple, a “cut” for illustration will be unnecessary.

The jaw of a child twelve years of age has not obtained its growth while the permanent teeth are full size. Now as the canines in this case have sufficient space to fully erupt, nature, through the growth and enlargement of the maxilla, with the assistance of lip pressure, will nearly, if not quite, force the teeth into a correct position. If, after the eruption of the canines, you think it necessary to draw the centrals back, use* Dr. F. H. Lee’s improved regulating screw and pull-back, attached to a rubber plate. After teeth are in place fasten with plate, bands, wire, or ligatures, allowing them to remain so fastened until thoroughly supported by a closing up or new formation of bone.

* Dr. E. H. Angle’s Set No. 1 of his system of regulating would no doubt furnish better appliances.—Ed. ITEMS.

For Our Patients.

A CONTRAST.

Two men toiled side by side from sun to sun,
 And both were poor ;
 Both sat with children, when the day was done,
 About their door.

One saw the beautiful in crimson cloud
 And shining moon.
 The other, with his head in sadness bowed,
 Made night of noon.

One loved each tree and flower and singing bird
 . On mount or plain ;
 No music in the soul of one was stirred
 By leaf or rain.

One saw the good in every fellow-man,
 And hoped the best ;
 The other marveled at his Master's plan,
 And doubt confessed.

One, having heaven above and heaven below,
 Was satisfied ;
 The other, discontented, lived in woe,
 And hopeless died.

Sarah K. Bolton.

A DISHEARTENED DENTIST.

A country dentist, who had experienced an uninterrupted lull in his practice, was called on by an aged spinster, saying :

"Mister, do you gin that ere kind of stuff wot, they say, makes folks laf when thar teeth is tuck out?"

"I administer laughing gas for the painless extraction of teeth," said the dentist, while rubbing his hands together briskly, and looking good naturedly because of an anticipated fee.

"Is it the same kind of stuff they use instead of candles in York, and other smart villages?"

"Oh, no, my dear madam; illuminating gas, such as used in New York and other cities, and nitrous oxide gas are as different as water and whisky," the dentist replied, with a sweet smile playing about his face, inspired doubtless, by the pertinency of his comparison.

"Tai'nt spirits of nitre, is it? fur Betsy wuz allers agin tak'n that kind ov medercine."

"Nothing like it, madam, I'll assure you," said the dentist, with just a dawning of irritation in his manner.

"Does it acter'ly make folks laf and act like fools when thar teeth is coming out?"

"It makes them feel jolly after their aching teeth are extracted because they knew nothing nor felt pain during the operation," said the dentist, while wondering how much longer his agony of suspense was to last.

"Don't they get kind'r skeer'd, and act offish sometimes?"

"They go into a profound sleep—that is all there is to it," muttered the dentist, while drops of cold perspiration ran down his forehead.

"Is it kind'r like goe'n inter a fit?" she asked, while removing her spectacles and commencing to polish the glasses.

"Good Lord, no!" exclaimed the dentist, with a look of hopeless despair.

"I've heer'd tell that sum folkses don't wake up atter take'n on it?"

"That's a mere matter of gossip," said the dentist, seating himself and clutching the camphor bottle; "the gas I give is entirely pure and harmless."

"How much do you ax for use'n on it?" she asked, replacing her spectacles and reaching for her pocket-book.

"One dollar for each tooth I extract, is my charge, and that is a small price considering the excellent quality of the gas I use," said the dentist, with a sparkle of renewed hope animating his heaving bosom; for he had caught sight of the pocket-book.

"Well," said the spinster, "I'll tell Betsy, fur the man wot lives in our town axed her one dollar, too; and she thought, see'n as how as I wuz com'n to this ere village shop'n, I might call on sum other feller wot gives the stuff and ax him his price." Then pausing a moment she continued: "But I guess she'd better take it to hum, fur she is'nt much used to goe'n 'mong strangers," saying which, she departed.

"Well," soliloquized the dentist, after she had gone, "I am perfectly broken up and hopelessly demoralized."

"What are you drinking so much milk for now?"

"For my teeth. Doctor told me powdered chalk was the very best thing."

—*St. Joseph News.*

THE MIND CURE.—Husband—"Getting that tooth pulled hurt pretty badly, didn't it?"

Wife—"No; I just thought of all the mean things you had ever said to me, and it made me so mad I forgot all about the tooth."

Did you hear of that man in New York who had his teeth blown out of a window, while he was uninjured?

No, but the man must have been cast iron.

Not quite; he was a dentist.

A professor in the New York Dental College asked one of the new students:

"What is the name of the teeth that a human being gets last?"

"Artificial teeth, of course."

"Would you like to have a tooth extracted?" said I to a patient the other day.

"No," she replied, "I do not want any extracting done to-day, but I would like one pulled."

"Got er toothache, Mary?"

"Yep."

"Have yer got er cavity in it?"

"Nop. I got cotton in it."

"Did you make an excuse for me, Bridget, when John called?"

"I did, Miss."

"What did you say?"

"I said you were in bed with the toothache."

"Mercy! And he knows every tooth in my head is false!"

"Your bill for extracting is three dollars."

"Did you not tell me if I took gas, I should know nothing about it?"

"Yes."

"Well, I do not know anything about it."

A dentist was accused of killing a patient in a dental operation,

"This would be impossible," he replied. "It was not a dental, but an acci-dental act."

"Oh!" said a poor sufferer to a dentist, "This is the second wrong tooth you've pulled out!" "Very sorry, sir," said the blundering operator, "but as there were only three when I began, I'm sure to be right next time."

Current Notes and Items.

Think of 390 dental firms, with 425 males and 50 females, in the small city of Chicago!

Appearances generally tell; but there are some dentists who are like a species of spiders, that, to inveigle their prey, assume the appearance of the foliage to which they attach themselves.

Dr. Frank C. Runyan, one of the great dental lights of the West, has deceased. Truly this year is being made memorial for the death of prominent dentists.

"Dentistry, more than most vocations," says Dr. Shepard, "forms a connecting link between the professions and trades, and must in its highest development exemplify each."

At the meeting in Atlanta, the late Dr. Atkinson said, after witnessing three clinics with the Genese Crowns, that they had all the advantages of the Logan Crowns, without the defect of the fixed pin.

Copal picture varnish, which may be had of a dealer in artists' materials, will do to paint over an exposed pulp. Dammar varnish will answer for the same purpose.

Dr. C. E. Kells, Jr., of New Orleans, who was an early user of amalgam in a careful, watchful manner, writes that even when handled with the utmost care many fillings which have not formed a protecting oxide disintegrate, and even some black fillings, wash out.

Dr. C. Sill, of New York, uses with oxyphosphate, for the purpose of obviating any irritant action, one part of petrolatum with eleven parts of oxide of zinc, and then combining with the liquid made somewhat thinner than usual. Thus prepared, he says, it makes a very hard filling.

The Coterian is a bright little monthly, published in Wilmington, Del., by *The Hamilton Debating Coterie*, with creditable ability. If young ladies and gentlemen in all our cities and large towns should amuse and instruct themselves and others in this way, it would be much better than the gossip and nonsense which often lead to dissipation and inanition.

J. W. Greene, of Chillicothe, Mo., uses but a very few spoonfuls of water in Hay's Vulcanizer, and finds the work just as good as if more were used. The pressure and danger are correspondingly lessened. He has used the same vulcanizer constantly for twenty-five years.

DR. O. B. LOVE, of San Antonio, Texas, has not seen a satisfactory answer to Question 15, and sends the following :

"Fill third molars with the best material you can use most satisfactory ; make an incision through the anterior alveolar plate ; cut off the point of root, and dress smooth with small stone or plug finishing burs. Let stand a week and remount your crown."

Familiar, short talks before the children of our schools on dental subjects are appreciated by children, teachers and the public. There are certain days and hours of the school when such efforts are most welcome. Seek such occasions and you will do the public and yourself a good. Draw the children to you by making them intelligent in this direction, and they will have less dread in approaching you, and you will by-and-by reap your harvest.

Educating the masses in dentistry is like the husbandman in the parable. You must expect some seed to fall by the wayside, some among thorns, and some on rocky places, but some will fall on good ground, and bring forth fruit to the sower. Oh, but that would be advertising. Then we would advocate advertising. For the twenty-six years we were a dentist we averaged one hundred and fifty dollars a year advertising, and yet we never advertised a line of space—not even a newspaper card.

OKLAHOMA HAS A DENTAL LAW.—We expressed our surprise six months ago that this newly-organized territory should have a dentist. Three months later we announced that it had a dental society. Now we are able to record the fact that it has a dental law. Well, thus we speed on at, literally, railroad speed. Dr. Peoples, of Guthrie, writes us that it is not all the dentists there could wish, but, as a beginning, it is a good thing. Guthrie, we believe, is where a few months ago the savages cut each others' throat in strife for "city lots," before a house was built or a lot surveyed. Had these "savages" been "red skins," Uncle Sam would have sent his troops after them, but as they were savages from civilization the strife was settled otherwise.

It is not always the hardest worker that thrives the best; but he that has the genius of mixing brains and muscle.

We see Dr. A. C. Runyan was one of the lecturers at the Summer Normal, South Haven, Mich., this year. His subject was *Hygiene of the Teeth*. This is, perhaps, the first time a lecture of this nature has been given in connection with such a course. It should be encouraged.

When trying to get the public interested in dental subjects, give them but one thing at the time; for when many are treated in the same paragraph the force of all is lost, and the lesson is not remembered. Write for your local papers, but generally mere items of interest, short, terse, and pithy.

Opportunities sometimes make the man, but more frequently the man makes the opportunities. But even opportunities may be squandered; golden opportunities may fly away before improved. Success depends on appropriating them promptly, wisely and with persistency.

A Roman doctor has discovered in many of the skulls found in Etruscan tombs, as well as in those deposited in various museums, interesting specimens of ancient dentistry in filling and in artificial teeth. Some of these skulls date as far back as the sixth century before Christ, proving that dentistry is not a modern art.

Pyoktanin is probably one of our best antiseptics and disinfectants. While it seems to be a sure germ arrester, and germ destroyer in the living body, it appears to be devoid of any injurious effects. If so, we have here a valuable remedy in purulent, gangrenous, septic, syphilitic, tubercular, and other micro-parasitic morbid conditions.

There is a man in Kansas City who is sometimes humored by an editor to shoot off squibs. In doing so the other day a weighty monthly came in contact with a corn on his great toe. He was foolish enough to vent his spite on it by a vigorous kick. Of course, this aggravated his pain, and he resorted to rum and tobacco as an antidote. Doubly foolish man, for he soon saw things so confusedly as to believe this was an ITEM OF INTEREST to the public; it proved to be an "item of insanity."

There is a class of cavities where it is almost impossible to use separators with safety, says Dr. C. N. Johnson. This is where the cavity extends high up on the neck of the tooth. He thinks if you use a separator on a tooth decayed in this way, the jaws of the appliance will check the enamel. But where the cavity does not come high, where there is no danger of checking the enamel, and where care is used in its adjustment, we can generally safely gain space with a separator. He is not so fearful of causing death of the pulp, as of injuring the enamel.

To painlessly remove the live pulp, Dr. Harper says: Take a drop of oil of cloves, and add enough cocaine to that to make a thick paste, and introduce it into the pulp, after having first put the rubber dam on the tooth; then by taking a broach, slowly work it down; with a bur open up the opening slowly, and in ten or fifteen minutes you can remove the pulp from any of the anterior teeth. Where arsenic has been applied to the pulp and the patient returns with pain, I find we can get better satisfaction from the application of cocaine.

A novel plan for extinguishing a church debt has been hit on in Melbourne. The church committee—or vestry, as the case may be—divide the total debt among themselves, and each man insures his life for the amount that falls to his share. The policies are transferred to the church, and the annual payments on them are made out of the collections. Then, of course, as the members of the committee “drop off,” the sums insured on their lives drop in, and later, when the last committeeman is dead, the last installment of the church debt will be paid. The plan has the merit—if merit it be—of throwing the whole of the responsibility for the continuance of the indebtedness on Providence.

“Ex.,” in his letter from New York to the *Dental Review*, says: Dr. James W. White, so suddenly removed, had an impression that his time was drawing to a close; he wrote in connection with the banquet of the Patriarchs that he felt that he would not be with us long. Dr. S. S. White told Dr. Atkinson, when bidding him adieu on shipboard, prior to his departure for Europe, that he did not expect to return alive. “Be ye also ready, for in such a time as ye think not the call may come,” and what more fitting than to be found watching and active? Every one of us ought to so live that we shall be willing and ready when the call comes; but, on the other

hand, it should be our purpose to so conduct our daily life that our career may not be cut off prematurely. The late Dr. Bronson said to us, the last time we met him, only a short time previous to his removal, that "he only ate to live." Dr. S. G. Perry said, at the last meeting of the O. S.: "Life was made noble by living to work for high purposes, and it was degraded without such inspiration." Truly, we are for noble purposes, and it is but brutish that any can live with no high aim. What is man, that he should be created for an immortal destiny?

NEW JERSEY STATE DENTAL SOCIETY.—The officers for the ensuing year are: President, B. F. Luckey, of Paterson; Vice-President, Oscar Adelberg, of Elizabeth; Secretary, C. A. Meeker, of Newark; Treasurer, George C. Brown, of Elizabeth; Executive Committee, Drs. Holbrook, of Newark; Watkins, of Montclair; Savage, of Orange, and Iredell, of New Brunswick; Membership Committee, Drs. Curtis, of Hackettstown; Truax, of Freehold; Palmer, of New Brunswick; Westlake, of Elizabeth, and Moon, of Paterson.

A meeting of the Union Dental Society formed of the combined Illinois and West Illinois Dental Societies will convene in Peoria, Ill., September 8th, 1891. The convention to last two days, or till the program is completed. The Executive Committee in full charge of "preparations for this meeting" report pledges for an excellent list of papers and clinics. Peoria is easily accessible by numerous railways. Let all attend.

At the annual meeting of the New Hampshire Dental Society, held in Concord, June 16th, 1891, the following were elected officers: President, W. R. Blackstone, Manchester; Vice-President, C. P. Webster, Franklin Falls; Treasurer, G. A. Young, Concord; Secretary, B. C. Russell, Keene; Librarian, G. A. Bowers, Nashua. Executive Council, J. N. French, Penacook; E. C. Blaisdell, Portsmouth; E. B. Davis, Concord.

It was voted to hold a special meeting of the Society, September 30th, and October 1st and 2d, 1891, at Manchester. All members of the profession are cordially invited to attend.

Efforts are being made to make this the largest and most profitable meeting of dentists ever held in the State. Come and make it a success.

B. C. Russell, Secretary.

The New Hampshire Board of Registration in Dentistry: William Jarvis, Claremont, President; Fred. W. Lunt, Rochester; Edward B. Davis, Concord, Secretary.

A meeting of the Board, for the purpose of examining those who desire to practice dentistry in this State, that were not in actual practice April 7th, 1891, will be held in Concord, September 1st and 2d, 1891. Those intending to come before the Board will please notify the Secretary as soon as possible.

Edward B. Davis, Secretary.

At a meeting of the First District Dental Society, of New York, held June 9th, 1891, the following resolutions were unanimously adopted:

WHEREAS, The First District Dental Society of the State of New York has learned with feelings of deep regret of the death of Dr. James W. White, of Philadelphia, an eminent and learned member of the dental profession.

Resolved, That in the death of Dr. White we recognize the fact that we have lost one who, by his labors in dental journalism and literature, has contributed largely to the advancement and elevation of dentistry as a profession.

Resolved, That, as an evidence of respect to the late Dr. James W. White, and of appreciation of his valuable services to our profession, these resolutions be entered on the records of the society, and a copy be sent to his family and to the dental journals for publication.

B. C. Nash, Secretary.

The annual meeting of the Post-Graduate Dental Association of the United States, was held at the Leland Hotel, Chicago, June 24th, Dr. Cushing, President, in the chair.

The order of the day was reports of officers, transaction of routine business, election of officers, and interesting discussions in regard to the future work of the society.

Officers elected for the ensuing year are as follows: President, Dr. R. B. Tuller, Chicago; Vice-Presidents, Dr. Levi S. Keagle, Vinton, Ia., Dr. A. P. Nicholson, Edgerton, Wis., and Dr. M. R. Julian, Lafayette, Ind.; Secretary and Treasurer, Dr. L. S. Tenney, Chicago.

This organization has just completed the second year of its existence, and seems to have struck a popular chord in the profession, as its rapidly increasing membership indicates.

As is generally well known, the main object of the society is to establish a systematic course of home study, and measures are now on foot to begin this work during the year.

Those desiring further information should address the Secretary, Dr. L. S. Tenney, 96 State street, Chicago, Ill.

Editorial.

PERSISTENCE.

In the class of which I was a member at medical college was a regular numbskull,—yes, he was. He did not know enough to know when he exhibited gross ignorance; not enough to know when his toes were stepped on; not enough to know his place was in the corner, when he was put there. He was everywhere, in everything, and, in his estimation, equal to every emergency. He was such an ignoramus that he was the laughing-stock of the whole school; even the professors poked fun at him, rebuked him for his silly answers, and silenced him in the midst of his ridiculous explanations of their teachings. Yet, at the end of the first term, that young man opened a city office next door to the office of two of the professors. He told his patients he was only a student, but audaciously prescribed for all who called; and some that did not call he was ready to invite there. “And be careful,” he would add, “not to get into the professors’ office; mine is next door, on the right.” When he got so far beyond his depth that he must call for help, he would come around to the professors with all the airs of a consulting physician. If, in a joking way, they gave him some ridiculous diagnosis or prescription, it was all the same. He was so intensely in earnest he knew no joke, no pretence, nothing but the most urgent business; and away he would go with his information, satisfied till experience divulged its folly.

That young man became a successful physician—not brilliant, of course, nor profound, but so persistent he outran his teachers in the extent of his practice.

The number at all our colleges who fail for the lack of this persistency is so great, it would be difficult to describe one without being accused of referring to someone’s friend in every college. Some are right down lazy, and, of course, ought not to succeed; others are inherently dull, and others lack material support. All these are to be pitied; but even the constitutionally lazy can arouse themselves, inherent dullness can be overcome, and im-

pecuniosity may make us economical of time and energy, as well as of money. There are others who are really brilliant, but from lack of persistency do not succeed. They are studious, but do not perfect each lesson; they are laborious and attentive, quick and observing, but are contented with receiving knowledge, but have not the patience and thoughtfulness and perseverance necessary to change knowledge into wisdom, processes into skill, and growth into maturity.

So as dentists, it is only the persistent that succeed. They who are not determined to surmount insurmountable obstacles,—who are not willing and able and enthusiastic enough to cut their own road through the wilderness, however rugged,—fall out by the way or return to ordinary work. Even the man who is willing to plod on at a slow, poor, dying rate has no business in the professions. There is too much learning needed, too much cuteness, skill and persistency. A hard road must be stimulating; chilly, dark days must be made warm and bright by the friction of extra labor, and we must see in every difficulty, intricacy and obstacle a victory.

In the profession of dentistry the man who has corns to be stepped on must get out of the way; he that will not fight must run, and all who cannot do the impossible must die.

CONSCIOUS RECTITUDE.

The best of purposes may be misunderstood; good acts may be misjudged; reputation may villify real characters, and character may have in it so many defects we may, ourselves, be ashamed of it. But, if we have conscious rectitude, we have peace that abides, comfort that is satisfying, enjoyment that is supreme. If misunderstanding does raise a storm, it only dashes against the window pane, all is calm within; if, in misjudging our acts, the world does grow cold without, we have a comfortable fire within; let them blacken our reputation, and make it night round about us, we are happy in the light of conscious rectitude. The little world about us makes our reputation, we make our character; and, though we

make mistakes and stumble, and are at best, much below the standard we aim at, if we do our best we do nobly—though it is not so well as those who can do better. There is a steadiness of purpose, unshaken by adverse circumstances and influences, an abiding trust that shuts out all anxiety, and a conscious progress that brushes aside all opposition.

There is strength, and dignity, and commanding presence in conscious integrity,—and growth and brawn and breadth of character—roundness, wholeness. It has no disguises, walks on no stilts, and needs no trumpets. It has a weight of step that gives it prominence, stability and power. Its influence is unseen but felt everywhere, its value is ridiculed but prized, and its triumph is sure. It cannot be bought, but it may be made. It cannot be put on, but it may be a growth. It cannot be cultivated in the midst of weeds and poisonous plants, but in a prepared soil, with care, intelligence and labor, it becomes a garden of luscious fruits.

A dentist has recently been compelled to retire from his work on account of ill health, who brought his physical and mental troubles on himself by the use of tobacco. The dentist who smokes several cigars daily is in danger of becoming a wreck before his work is done. No calling brings so heavy a strain on the nervous system as dental work. The peculiar tasks the dentist has to perform almost daily keep his nerves wrought up to a high tension, if he is a man of fine sensibilities. The particular physical peril to which dentists are exposed is aggravated by the use of tobacco. When he is prostrated by the toils his work imposes on him, he deserves sympathy; but when through the use of tobacco his nerves give way, he merits severe condemnation. What business has a dentist with tobacco any way? We have known some whose garments smelled, not of myrrh, but of smoke, so that their presence in a room was exceedingly offensive. Patients are, sometimes, almost stifled with the odor which proceeds from a smoking dentist's clothes when he comes into such near proximity to his patient as his work makes necessary. Perhaps these men are not aware of

the pain, or at least the disgust, they thus inflict on their patrons, and especially on the more delicate. Their usefulness and income are immensely lessened by a habit which may seem to them harmless and but a trifle.

There are two reasons why Welch's nerve paste generally painlessly devitalizes the exposed pulp of a tooth. First, there is no morphine in it; for the general belief that morphine is the very thing to soothe an aching tooth is erroneous. It is as fire to an exposed pulp. Try it on any raw surface, and see if I am not right. Second, it contains tannin, which constringes the pulp almost the moment it touches it. Now the cause of toothache is not simply that the pulp is exposed. A nerve in its normal condition has no feeling. You may cut it and prick it with impunity. A tooth may be broken off, leaving the healthy pulp sticking up to full exposure, yet it will not be sensitive till it takes on congestion. By this the blood coming to the part cannot circulate through its capillaries and return to the general circulation, because of the collapsed condition of the blood vessels. The consequence is inflammation. But even then there will not be pain till the blood brought to the parts presses itself through the collapsed blood vessels with unnatural force. This is what brings pain, here and everywhere else in the body; for every artery is accompanied by a nerve, and abnormal pressure on a nerve always and everywhere produces pain, and is the only cause of pain. If you can stop the circulation of blood to the pulp, you can stop the pain. This tannin does, and mumifies the part.

TEETH that have been buried more than one hundred and fifty years were recently found to be free from decay. It is a singular circumstance that when a carious tooth is extracted, the progress of the decay ceases; yet, if a sound tooth is extracted and returned to the mouth, it is subjected to decay like live teeth.

The dull scholar often outstrips the boy of genius, because the former is obliged to study to keep his place in his class while the latter does so without exertion. This necessity for hard work is more essential to a well rounded character and a useful, successful life than genius. Let us not despise natural aptitude, quickness of perception, and inherent tact, but let us still more prize perseverance, studiousness, and thoroughness.

Patients coming to a strange dental office can generally tell the standing, capabilities and general character of the dentist by his appearance and surroundings, for he cannot divest himself from what he is, and this becomes a protection and guide to the visitor. But to this rule there are some exceptions. There are a few who can assume what they are not. Assumption, however, is but gilt, and soon wears off, revealing the real character.

Be distinctive by doing something that your neighboring dentists do not do. To be mediocre is to be a nonentity and unsuccessful. But to be only a little taller than those about you gives you a prominence that is every way advantageous. Be able to do something that shall place you there,—something of real merit, and it will be recognized without the blowing of trumpets. And the doing of that something will be sure to give you the ambition of doing more, till finally nothing can hide you, and all things will work together for your good. Merit success and it will not be long before you will have it.

The case of poor, young Baab; of New York, who was bitten by a patient while having a tooth pulled, that we mentioned in *JULY ITEMS*, proved fatal. First it was lock-jaw, as we then mentioned, and then typhus fever caused by the general diffusion of the poison. What a warning this should be to the careless insertion of the fingers between the jaws to make such results possible. While I am writing this note, a friend calls to say his son, a young dentist of Camden, N. J., is suffering from a similar injury. Let us hope the result will not prove as serious.